State of Nevada Purchasing Division
Nevada Department of Environmental Protection

RFP 3251

Technical Support for the National Environmental Information Exchange Network

Part IA - Technical Proposal

July 6, 2016

WINDSOR SOLUTIONS | Environmental + Health Information Systems

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SUBMISSION CHECKLIST

This checklist is provided for vendor's convenience only and identifies documents that must be submitted with each package in order to be considered responsive. Any proposals received without these requisite documents may be deemed non-responsive and not considered for contract award.

Part I A– Technical Proposal Submission Requirements		**Completed**
Required number of Technical Proposals per submission requirements		X
Tab I	Title Page	X
Tab II	Table of Contents	X
Tab III	Vendor Information Sheet	X
Tab IV	State Documents	X
Tab V	Attachment B – Technical Proposal Certification of Compliance with Terms and Conditions of RFP	X
Tab VI	Section 4 – System Requirements	X
Tab VII	Section 5 – Scope of Work	X
Tab VIII	Section 6 – Company Background and References	X
Tab IX	Attachment I – Proposed Staff Resume(s)	X
Tab X	Preliminary Project Plan	X
Tab XI	Other Information al Material	X
Part I B – Confidential Technical Proposal Submission Requirements		N/A
Required number of Confidential Technical Proposals per submission requirements		
Tab I	Title Page	
Tabs	Appropriate tabs and information that cross reference back to the technical proposal	
Part II – Cost Proposal Submission Requirements		
Required number of Cost Proposals per submission requirements		X
Tab I	Title Page	X
Tab II	Cost Proposal	X
Tab III	Attachment K - Cost Proposal Certification of Compliance with Terms and Conditions of RFP	X
Part III – Confidential Financial Information Submission Requirements		
Required number of Confidential Financial Proposals per submission requirements		X
Tab I	Title Page	X
Tab II	Financial Information and Documentation	X
CDs Required		
One (1)	Master CD with the technical and cost proposal contents only	X

One (1)	Public Records CD with the technical and cost proposal contents only	X
Reference Questionnaire Reminders		
Send out Reference Forms for Vendor (with Part A completed)		X
Send out Reference Forms for proposed Subcontractors (with Part A and Part B completed, if applicable)		N/A

Tab I – Title Page

State of Nevada Purchasing Division
Nevada Department of Environmental Protection

RFP 3251

Technical Support for the National Environmental Information Exchange Network

Part IA - Technical Proposal

Windsor Solutions, Inc.
4386 SW Macadam Ave, Suite 101
Portland, OR 97239

Opening Date: July 6, 2016
Opening Time: 2:00 PM

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Tab III – Vendor Information Sheet

VENDOR INFORMATION SHEET FOR RFP 3251

Vendor Must:

A) Provide all requested information in the space provided next to each numbered question. The information provided in Sections V1 through V6 will be used for development of the contract;
B) Type or print responses; and
C) Include this Vendor Information Sheet in Tab III of the Technical Proposal.

V1	Company Name	Windsor Solutions, Inc.	
V2	Street Address	4386 SW Macadam Ave, Suite 101	
V3	City, State, ZIP	Portland, OR 97239	
V4	Telephone Number		
	Area Code: 503	Number: 675-7833	Extension: 215
V5	Facsimile Number		
	Area Code: 503	Number: 675-7804	Extension:
V6	Toll Free Number		
	Area Code:	Number:	Extension:
V7	***Contact Person for Questions / Contract Negotiations, including address if different than above***		
	Name: Craig Austin		
	Title: Communications Manager		
	Address: 4386 SW Macadam Ave, Suite 101		
	Email Address: craig_austin@windsorsolutions.com		
V8	Telephone Number for Contact Person		
	Area Code: 503	Number: 675-7833	Extension: 215
V9	Facsimile Number for Contact Person		
	Area Code: 503	Number: 675-7804	Extension:
V10	***Name of Individual Authorized to Bind the Organization***		
	Name: Simon Watson	Title: Vice President	
V11	Signature ***(Individual must be legally authorized to bind the vendor per NRS 333.337)***		
	Signature: SWatson		Date: 7/1/2016

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Tab IV – State Documents

Amendment 1

State of Nevada
Department of Administration
Purchasing Division
515 E. Musser Street, Suite 300
Carson City, NV 89701

Brian Sandoval
Governor

Jeffrey Haag
Administrator

SUBJECT:	Amendment 1 to Request for Proposal 3251
RFP TITLE:	Technical Support For The National Environmental Information Exchange Network
DATE OF AMENDMENT:	June 24, 2016
DATE OF RFP RELEASE:	June 3, 2016
OPENING DATE:	July 6, 2016
OPENING TIME:	2:00 PM
CONTACT:	Gail Burchett, Procurement Staff Member

The following shall be a part of RFP *3251*. If a vendor has already returned a proposal and any of the information provided below changes that proposal, please submit the changes along with this amendment. You need not re-submit an entire proposal prior to the opening date and time.

1. Can we use sub-contractor references?

   You can submit references for your sub-contractor but you will also need to submit references for the prime contractor.

2. What is the budget?

   Approximately $200,000 a year

3. Is there a timeline to complete this project?

   This is ongoing effort with multiple individual tasks through the life of the contract. The timeframe to complete an individual task depends on the complexity of the individual project.

4. Can we do on/off-side work combination?

   Yes.

5. Can we use sub-contractor references?

   See #1

6. What is the annual budget for this RFP?

   See # 2

Amendment 1 *RFP 3251* *Page 1 of 3*

7. Is there a timeline to complete this project?

   See # 3

8. Can we do on / off-side work combination?

   Yes.

9. Is there any incumbent on this RFP? If yes, please provide the incumbent details.

   Windsor Solutions, Inc. They have held the contract for 5 years.

10. Please let us know the last year's spending on this RFP.

    Approximately $200,000

11. Is it single award or multiple award contract?

    Single.

12. Is there an incumbent vendor? If so, what company and how long have they held the contract?

    See # 9

13. What level of effort does the State anticipate, specifically for FTEs?

    The previous contract did not have one specific FTE dedicated to the project(s). It is anticipated that .5 and .75 of an FTE will be required throughout the course of one year. Contractors are free to divide up the workload between multiple FTEs.

14. Does the State have a dollar or a budget amount they anticipate for this project?

    See # 2

15. Is there any possibility of extension of the proposal due date?

    No.

16. Can we use one of the same references as our sub-contractor?

    Yes.

17. Is there a budgeted range for the project?

    See # 2

18. Most of the RFP is very clear about which section of the proposal response we write our response to except for sections 6.1.9, 6.1.10 and 6.2.1.3 (A, B and C) In what tabs of the RFP response should these answers appear?

This information should be included with your technical response.

19. Proposed staff resume form: The RFP states that three references are required for a sub-contractor. Are three references required for proposed employee staff?

No. References apply to the company only.

ALL ELSE REMAINS THE SAME FOR RFP 3251.

Vendor must sign and return this amendment with proposal submitted.

Vendor Name: Windsor Solutions, Inc.

Authorized Signature: _____

Title: Vice President Date: July 1, 2016

This document must be submitted in the "State Documents" section/tab of vendors' technical proposal.

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ATTACHMENT A – CONFIDENTIALITY AND CERTIFICATION OF INDEMNIFICATION

Submitted proposals, which are marked "confidential" in their entirety, or those in which a significant portion of the submitted proposal is marked "confidential" **will not** be accepted by the State of Nevada. Pursuant to NRS 333.333, only specific parts of the proposal may be labeled a "trade secret" as defined in NRS 600A.030(5). All proposals are confidential until the contract is awarded; at which time, both successful and unsuccessful vendors' technical and cost proposals become public information.

In accordance with the Submittal Instructions of this RFP, vendors are requested to submit confidential information in separate binders marked "**Part I B Confidential Technical**" and "**Part III Confidential Financial**".

The State will not be responsible for any information contained within the proposal. Should vendors not comply with the labeling and packing requirements, proposals will be released as submitted. In the event a governing board acts as the final authority, there may be public discussion regarding the submitted proposals that will be in an open meeting format, the proposals will remain confidential.

By signing below, I understand it is my responsibility as the vendor to act in protection of the labeled information and agree to defend and indemnify the State of Nevada for honoring such designation. I duly realize failure to so act will constitute a complete waiver and all submitted information will become public information; additionally, failure to label any information that is released by the State shall constitute a complete waiver of any and all claims for damages caused by the release of the information.

This proposal contains Confidential Information, Trade Secrets and/or Proprietary information as defined in ***Section 2 "ACRONYMS/DEFINITIONS."***

Please initial the appropriate response in the boxes below and provide the justification for confidential status.

Part I B – Confidential Technical Information			
YES		NO	
Justification for Confidential Status			

A Public Records CD has been included for the Technical and Cost Proposal			
YES		NO (See note below)	X
Note: By marking "NO" for Public Record CD included, you are authorizing the State to use the "Master CD" for Public Records requests.			

Part III – Confidential Financial Information			
YES	X	NO	
Justification for Confidential Status			
Windsor is a privately held company and does not disclose financial information to outside parties. We request the State of Nevada not disclose the confidential financial information in Part III.			

Windsor Solutions

Company Name

Signature

Simon Watson July 1, 2016

Print Name Date

This document must be submitted in Tab IV of vendor's technical proposal

ATTACHMENT C – VENDOR CERTIFICATIONS

Vendor agrees and will comply with the following:

(1) Any and all prices that may be charged under the terms of the contract do not and will not violate any existing federal, State or municipal laws or regulations concerning discrimination and/or price fixing. The vendor agrees to indemnify, exonerate and hold the State harmless from liability for any such violation now and throughout the term of the contract.

(2) All proposed capabilities can be demonstrated by the vendor.

(3) The price(s) and amount of this proposal have been arrived at independently and without consultation, communication, agreement or disclosure with or to any other contractor, vendor or potential vendor.

(4) All proposal terms, including prices, will remain in effect for a minimum of 180 days after the proposal due date. In the case of the awarded vendor, all proposal terms, including prices, will remain in effect throughout the contract negotiation process.

(5) No attempt has been made at any time to induce any firm or person to refrain from proposing or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal. All proposals must be made in good faith and without collusion.

(6) All conditions and provisions of this RFP are deemed to be accepted by the vendor and incorporated by reference in the proposal, except such conditions and provisions that the vendor expressly excludes in the proposal. Any exclusion must be in writing and included in the proposal at the time of submission.

(7) Each vendor must disclose any existing or potential conflict of interest relative to the performance of the contractual services resulting from this RFP. Any such relationship that might be perceived or represented as a conflict should be disclosed. By submitting a proposal in response to this RFP, vendors affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest will automatically result in the disqualification of a vendor's proposal. An award will not be made where a conflict of interest exists. The State will determine whether a conflict of interest exists and whether it may reflect negatively on the State's selection of a vendor. The State reserves the right to disqualify any vendor on the grounds of actual or apparent conflict of interest.

(8) All employees assigned to the project are authorized to work in this country.

(9) The company has a written equal opportunity policy that does not discriminate in employment practices with regard to race, color, national origin, physical condition, creed, religion, age, sex, marital status, sexual orientation, developmental disability or handicap.

(10) The company has a written policy regarding compliance for maintaining a drug-free workplace.

(11) Vendor understands and acknowledges that the representations within their proposal are material and important, and will be relied on by the State in evaluation of the proposal. Any vendor misrepresentations shall be treated as fraudulent concealment from the State of the true facts relating to the proposal.

(12) Vendor must certify that any and all subcontractors comply with Sections 7, 8, 9, and 10, above.

(13) The proposal must be signed by the individual(s) legally authorized to bind the vendor per NRS 333.337.

Windsor Solutions, Inc.

Vendor Company Name

SWatson

Vendor Signature

Simon Watson — July 1, 2016

Print Name — Date

This document must be submitted in Tab IV of vendor's technical proposal

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Vendor Licensing Agreements

Windsor's Exchange Network projects entail the use of open source software such as OpenNode2 Exchange Network node and its associated plugins, which are also open source software. Therefore, no licensing agreements are anticipated under the currently known scope of this contract.

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Staff Certifications and Licenses

Project Management Institute

THIS IS TO CERTIFY THAT

Kevin Michael Lyons

HAS BEEN FORMALLY EVALUATED FOR DEMONSTRATED EXPERIENCE, KNOWLEDGE AND PERFORMANCE IN ACHIEVING AN ORGANIZATIONAL OBJECTIVE THROUGH DEFINING AND OVERSEEING PROJECTS AND RESOURCES AND IS HEREBY BESTOWED THE GLOBAL CREDENTIAL

Project Management Professional (PMP)®

IN TESTIMONY WHEREOF, WE HAVE SUBSCRIBED OUR SIGNATURES UNDER THE SEAL OF THE INSTITUTE

Antonio Nieto-Rodriguez • Chair, Board of Directors

Mark A. Langley • President and Chief Executive Officer

PROJECT MANAGEMENT INSTITUTE CORPORATE SEAL 1969 PENNSYLVANIA

PMP® Number: 1502851

PMP® Original Grant Date: 24 April 2012

PMP® Expiration Date: 23 April 2018

PMI. Project Management Institute

ScrumAlliance®
Transforming the World of Work

Kevin M. Lyons

is awarded the designation Certified ScrumMaster® on this day, May 24, 2016, for completing the prescribed requirements for this certification and is hereby entitled to all privileges and benefits offered by SCRUM ALLIANCE®.

Scrum Alliance CSM CERTIFIED

Certificant ID: 000532606 Certification Expires: 24 May 2018

Anu M Smalley
Certified Scrum Trainer®

Chairman of the Board

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Tab V – Attachment B

I have read, understand and agree to comply with ***all*** the terms and conditions specified in this Request for Proposal.

YES X I agree to comply with the terms and conditions specified in this RFP.

NO _____ I do not agree to comply with the terms and conditions specified in this RFP.

If the exception and/or assumption require a change in the terms in any section of the RFP, the contract, or any incorporated documents, vendors ***must*** provide the specific language that is being proposed in the tables below. If vendors do not specify in detail any exceptions and/or assumptions at time of proposal submission, the State will not consider any additional exceptions and/or assumptions during negotiations.

Windsor Solutions, Inc.

Company Name

Signature

Simon Watson July 1, 2016

Print Name Date

Vendors MUST use the following format. Attach additional sheets if necessary.

EXCEPTION SUMMARY FORM

EXCEPTION #	RFP SECTION NUMBER	RFP PAGE NUMBER	EXCEPTION (Complete detail regarding exceptions must be identified)

ASSUMPTION SUMMARY FORM

ASSUMPTION #	RFP SECTION NUMBER	RFP PAGE NUMBER	ASSUMPTION (Complete detail regarding assumptions must be identified)

This document must be submitted in Tab V of vendor's technical proposal

Tab VI – Section 4, System Requirements

Vendors must place their written response(s) in ***bold/italics*** immediately following the applicable RFP question, statement and/or section.

4. SYSTEM REQUIREMENTS

4.1 VENDOR RESPONSE TO SYSTEM REQUIREMENTS

Vendors must explain in sufficient detail how the vendor will satisfy the NDEP project requirements described below. If subcontractors will be used for any of the tasks, vendors must indicate what tasks and the percentage of time subcontractor(s) will spend on those tasks.

4.2 COMPUTING PLATFORM

The network operating systems are Microsoft Windows Server 2012 and Microsoft Windows Server 2008.

The database environment is a mixture of Oracle 11gR2 and Microsoft SQL Server 2012. The Nevada Division of Environmental Protection uses a modern 1Gigbit Ethernet network connecting all workstations, file servers, web servers, and database servers.

Windsor Response:

Windsor has extensive experience working with the subject computing platform and database environments, as well as intimate familiarity with a variety of additional platforms and environments. If NDEP were to make a substantial change to platform or environment, Windsor would be able to work effectively with NDEP to migrate existing systems or develop new applications in the new technology.

4.3 TECHNICAL REQUIREMENTS

4.3.1 Development of "node plug-ins" that enables new data flows using the State's node on the Federal Exchange Network.

Windsor has a tried and tested approach to developing node plugins for the Exchange Network. Windsor has built the following plugins which demonstrate our capability within this area and demonstrate the company's ability to meet this requirement.

- ***AQS v2.0***
- ***Attains***
- ***Beach Notification v2.0 and v2.1***
- ***Biodiversity v0.9***
- ***CAFO v1.0***
- ***CERS v1.0***
- ***EMTS v1.0***
- ***ICIS 1.5 (ICIS-NPDES and ICIS-Air plugins)***
- ***NHDUpdate v1.0***
- ***RCRA v3.0 and v4.0***

- ***TRI v2.0 and v4.0***
- ***UIC v1.0***
- ***WQX v1.0, v2.0, and v2.1***

4.3.2 Development of data extraction routine.

With Windsor's involvement in the Exchange Network, the need to pull data from source systems into the Node's staging tables has given the company substantial experience in developing extract, transform, load (ETL) routines.

Working with client staff Windsor facilities flow design sessions that allow the team to perform data mapping between the source data systems and the intended data flow XML schema. Once that is understood the Windsor team is able to establish appropriate ETL's to bring the source data into the appropriate staging environment.

The following are a few of examples projects where Windsor has had substantial work in developing and implementing such routines.

1) ***Windsor implemented a WQX Exchange project for the Northwest Indian Fisheries Commission (NWIFC). NWIFC is a consortium of twenty Indian tribes in western Washington whose role is to assist the tribes' natural resource activities and to provide efficiencies that would not otherwise be realized by the tribes when working independently. As such, the NWIFC applied for and received an Exchange Network Grant to develop a "Super-Node" of sorts which would allow tribes to exchange ambient water quality information amongst themselves as well as directly with the EPA or other partners.***

   Windsor worked with the NWIFC and Tribes to perform the data mapping and to establish the data extraction routines to get data from source systems into staging tables. The resulting system allows tribes to participate in a much greater level of data sharing than was previously available. The solution has helped to prove to some of the smaller partners that exchanging data on the Exchange Network does not require a complex or expensive system.

2) ***The Georgia Environmental Protection Division contracted with Windsor to upgrade their existing Java node to the latest version and to establish several data flows. Windsor worked with the division to establish data extracts for the WQX data flow and for the EIS data flow, both of which are flows that Nevada wishes to support.***

   In performing this work Windsor followed a standard approach to map the source data to the set of staging tables needed to support the respective flows. Following this Windsor built the extraction, transformation and load routines to take the data from the source systems and store it in the appropriate staging tables.

3) ***Minnesota Pollution Control Agency first came to Windsor in 2005 for support with their participation in the exchange network. Since that time Windsor has supported the agency with many dataflows including NEI, FRS, RCRA, AQS, ICIS-Air, ICIS-NPDES as well as others. All of these initiatives have required the extraction of data from an originating data source. In some instances, several data sources provided data that needed to be reconciled prior to submission.***

4.3.3 Transformation and loading routines to convert data to XML:

Windsor utilizes Node plugins to transform and load data contained within a set of staging tables into a compliant XML document. In implementing the OpenNode2 solution in many locations, Windsor has

also obtained experience in building the necessary plugins to create the appropriate XML documents that are then exchanged between the Node and the EPA.

Windsor has built the following Exchange Network plugins which demonstrate our capability with the conversion of data to XML.

- ***AQS***
- ***Beach Notification v2.0 and v2.1***
- ***Biodiversity v0.9***
- ***CAFO***
- ***CERS***
- ***EIS***
- ***EMTS***
- ***FacID***
- ***ICIS-NPDES***
- ***ICIS-Air***
- ***NHDUpdate***
- ***RCRA***
- ***TRI***
- ***UIC***
- ***WQX***

4.3.4 Development and implementation of new data flows as assigned:

Windsor has a proven approach to designing and implementing new data flows for its clients. In many instances the plugin is already established to conform to the exchange network standards; however, the flow design and implementation may vary from client to client. Windsor staffs these engagements with individuals that have substantial experience solving these challenges for other clients. A few examples of new and innovative data flows developed by Windsor in recent years include:

- ***Homeland Emergency Response Exchange (HERE)***
- ***Juvenile Migrant Salmon Exchange (JMX)***
- ***Nearshore Habitat Data Exchange***
- ***WQX Benthic Macroinvertebrate Data Exchange***

4.3.5 Upgrade of existing data flows as assigned:

Periodically existing data flows need to be updated. This can be a result of an EPA imposed modification to the flow specifications or changes with client's internal systems. In either case Windsor is very accustomed to evaluating the impacts of such changes and then designing upgraded plugins and ETLs to accommodate those changes.

Windsor's typical approach to a flow upgrade can be described in a list of tasks as follows.

1. ***Verify and upgrade latest Node version to ensure any patches are added to the NDEP version(s).***
2. ***Review impact of existing data flow upgrade***
3. ***Perform necessary upgrade work to accommodate the upgraded flow***
    a. ***Plugin modifications***
    b. ***ETL modification***

   c. ***Source system modification***

4. ***Deploy, Test and Rectify the upgraded components within the NDEP Test environment***
5. ***Deploy to Production***
6. ***Provide NDEP Node Administrator training***
7. ***Deliver updated Node administration documentation***

New data flows anticipated include:

4.3.5.1 Flow of ICIS-AIR data to US EPA's ICIS AIR database system from local NDEP Air Permit SQL Database.

Windsor has substantial practical experience with the ICIS-Air data flow having been awarded a contract with the EPA to provide ICIS-Air Data Flow Support for several state agencies, in addition to contracting directly with a number of state agencies for this flow. Windsor would utilize this experience to effectively and efficiently address the needs of NDEP with respect to the ICIS-Air flow.

Such an approach would be close to this example approach. Note that an exact approach for any given flow will be customized to meet the specific needs of that flow and of the program.

1. Initiate Project

1.1. Develop Project Plan

A project plan will be developed that details the project tasks and schedule, including a detailed work breakdown structure. The plan will describe the timing and expected level of effort required from all parties throughout the project.

Deliverable(s)

- ***Project plan document***

1.2. Hold Project Kickoff Meeting

A conference call will be held with the project team to review the project plan, proposed schedule, and initial risk assessment. This meeting will also be used to ensure that all project participants understand the goals of the project, the expected outcomes, and their roles and responsibilities.

Deliverable(s)

- ***Project kickoff meeting***

2. Design Data Flow

2.1. Hold Design Meeting

Windsor will facilitate meetings with NDEP staff to confirm the data submission and verification work flow process.

Deliverable(s)

- ***Data flow design meeting***

2.2. Map Data Flow

Windsor will facilitate additional meetings with NDEP staff to map the data managed in the source database to the Data Exchange Template (DET) and XML schema for each of the data submission types that will be submitted.

This data mapping exercise will need to consider each of the data extraction steps that will be involved in the process, and the format of the data that will be returned by the extract routines.

This mapping will be used to guide the development of the data extraction procedures. It will also direct data cleaning tasks to be conducted by NDEP staff that may be needed to meet business rules.

Deliverable(s)

- ***Data flow mapping***

2.3. Develop Data Flow Design Documents

Windsor will document the intended data flow design, and will finalize a detailed mapping specification that will be used to develop the data extraction logic. The design documentation will also describe any data cleaning activities that will be required within the NDEP system.

Deliverable(s)

- ***Draft data flow design document***

2.4. Review Design Documents

The data flow design documents will be reviewed by NDEP and questions and issues will be resolved.

Deliverable(s)

- ***Final data flow design document***

2.5. Hold Design Project Checkpoint Meeting

Windsor will meet with the NDEP project team to discuss any major roadblocks or issues that need to be addressed. This meeting will also be used to review the project scope and plan subsequent development, testing and implementation activities.

There is a chance that data flow design activities will reveal issues in the source data in the NDEP system that cannot be resolved by data cleaning activities alone. This meeting will discuss any changes that may therefore be required to the scope of data families to be submitted through the data flow.

The project schedule will be revised as necessary to accommodate data cleaning and any other changes that may be required.

Deliverable(s)

- ***Design checkpoint meeting***

3. Develop Data Flow

3.1. Develop Data Load Procedures

Windsor will develop database procedures to extract, transform and load data from the database to populate the OpenNode2 data flow staging tables.

Deliverable(s)

- ***Data load procedures***

3.2. Support Data Cleaning

The Design Document will specify any data cleaning activities that will be required in the database. Additional data cleaning needs will likely be determined during data flow testing.

NDEP staff will be responsible for conducting data cleaning tasks to update any data contained in the database to be compliant with business rules. Windsor will assist NDEP staff as required.

Deliverable(s)

- ***Data cleaning support***

4. System Test Data Flow

4.1. Install Data Flow in Test Environment

The NDEP OpenNode2 test and production instances will be updated to the latest available version if necessary.

The ICIS-Air data flow will be installed and configured in the NDEP OpenNode2 test environment. This will involve installing and configuring the OpenNode2 ICIS- Air plug-in(s) and the corresponding staging table environment.

Deliverable(s)

- ***Data flow installed in test environment***

4.2. Test Data Flow

The data flow will be locally tested using the NDEP OpenNode2 and data extracts from the test environment. Once local testing has been completed, test submissions will be sent to EPA via CDX for testing and evaluation by the EPA. These testing tasks will be coordinated with EPA to avoid scheduled maintenance activities on the system.

It is expected that multiple test submissions will be conducted to the stage environment during this task to iteratively confirm that all data submission types meet business rules.

Based on the testing results, Windsor will make modifications to the data extraction procedures as needed. NDEP staff will conduct additional data cleaning as needed.

Deliverable(s)

- ***Tested data flow***

5. Implement Data Flow

5.1. Install Data Flow in Production Environment

The data flow will be deployed and enabled in the NDEP OpenNode2 production environment. Initial production submissions will be supported.

Windsor will provide a data flow implementation guide document and hold a knowledge transfer meeting.

Deliverable(s)

- ***Data flow installed in production environment***
- ***Data flow implementation guide***
- ***Knowledge transfer meeting***

4.3.5.2 Flow of Assessment and Total Maximum Daily Load Tracking and Implementation System (ATTAINS) data from local NDEP source data systems.

Windsor has experience implementing the ATTAINS data flow and would follow a standard data flow design and implementation process.

A similar approach to that described above in section 4.3.5.1 would be used to address the ATTAINS Flow. Most recently Montana DEQ engaged Windsor to develop and implement the new ATTAINS flow for the agency.

Montana DEQ submits water quality standards attainment data biannually to EPA under the Clean Water Act Section 303(d) and 305(b) programs. In past years, DEQ used the OpenNode2 software to submit this data to EPA via the Exchange Network using the OWIR-ATT XML format. In 2016, EPA undertook an effort to modernize the data exchange to utilize a new format and a new receiving system known as ATTAINS to accept this data.

Windsor participated as a member of the joint State/EPA project team to define the revised ATTAINS data format. Using the draft XML schema produced by EPA, Windsor developed a set of staging tables and a new OpenNode2 plugin. In parallel, Windsor conducted an on-site data mapping meeting with DEQ to develop a mapping from DEQ's source system, WARD, to the new XML schema. Windsor then developed an Extract, Transform, and Load (ETL) routine to populate the plugin staging tables. Windsor then deployed the revised plugin and ETL to the DEQ environment for testing against the EPA system.

DEQ is currently in the final stages of testing and implementation of the new flow. With Windsor's assistance, DEQ is on track to be the first state to successfully submit to the EPA ATTAINS system using the new format. Windsor will be publishing the OpenNode2 ATTAINS data flow plugin and documentation to the OpenNode2 open source repository upon completion of the testing phase for all regulatory agencies to use.

4.3.5.3 Develop water quality evaluation/assessment system that allows organizations to compile supporting data, perform evaluations of water quality and to present the results of this evaluation.

Windsor has experience building this type of solution and is able to bring a specific application to NDEP that will support this need.

For this particular initiative Windsor would recommend an approach that assesses the gaps between the agency-expressed needs and the existing application offered by Windsor.

The following approach would form the basis for such a project. Note that the actual approach adopted may differ, if necessary, from that described below.

1. Initiate project

A meeting will be held with the project team to review the project, proposed schedule, and initial priorities. This meeting will also be used to ensure that all project participants understand the goals of the project, the expected outcomes, and their roles and responsibilities.

Deliverable(s)

- ***Project Kickoff Meeting***
- ***Project Plan***

2. Gap Analysis & Requirements Gathering

Windsor will hold a meeting with NDEP staff to work through the mechanics of the WQAR application and to identify any Nevada specific modifications that MUST be completed for deployment within the NDEP environment. Additionally, any enhancements desired by NDEP may be captured however Windsor recommends addressing any desired enhancements as a post implementation activity. Example areas for considerations include:

- ***Security and authentication.***
- ***Source data and ETL routines.***

For any necessary changes Windsor will provide design specifications to illustrate the following, as they relate to the expressed new features.

- ***Overall layout and navigation changes***
- ***User interface design modifications***
- ***Database updates***

NDEP staff will be asked to review and confirm the design specifications and these will be used during a project checkpoint and as a basis for modifying the existing, or creating a new task order.

Deliverable(s):

- ***Design Specification***

3. Base Implementation / Configuration

Windsor will complete any necessary enhancements for the system and will work with NDEP staff to establish the test environment and to deploy the NVWQ Assessment System to that environment. As part of the deployment Windsor will configure the application for NDEP.

The NVWQ Warehouse will be considered the source of data for the NVWQ Assessment System.

Deliverables

- ***NVWQ Assessment System deployed to test***

4. System Test Application

Windsor and NDEP technical staff will install a fresh test version of the new application in the system test environment. Note that there may be multiple system test application releases throughout the build process.

Windsor will present the NVWQ Assessment System application to the project team reviewing the test process with those involved in testing. Windsor will then support the system testing activities. System testing will involve confirming that the application functions as specified.

Windsor will resolve reported issues and respond to submitted questions and comments. An issue tracking system will be used during user testing, allowing testers to see all reported issues and monitor the progress of resolution. Windsor will keep track of all modifications made, so that the users can re-test the system to confirm that the appropriate resolution has been achieved.

Deliverables:

- ***Deployed system test release(s)***
- ***System test issue/resolution log***

5. Acceptance Test Application

Windsor and NDEP technical staff will install an updated version of the new application in the acceptance test environment. This release will include fixes to all issues reported during system testing activities.

Windsor will present the acceptance test version to the project team following the acceptance test release into the technical environment. Windsor will review the acceptance test process and set clear user testing expectations.

Windsor will support NDEP in the acceptance testing activity, as needed. Windsor will resolve reported issues and respond to submitted questions and comments. Feedback submitted during user acceptance testing will be addressed as quickly as possible and returned to testers for resolution confirmation.

Deliverables:

- ***Deployed acceptance test release(s)***
- ***Acceptance test issue/resolution log***

6. Implement Application

Once the acceptance test application release has been tested and all resolutions have been confirmed, users will approve the implementation of the new system into the production environment. Windsor will then prepare the application for delivery and implementation.

Windsor and NDEP technical staff will install and configure the new application. Windsor will provide high-level application user training to NDEP staff. Windsor will also meet with NDEP technical staff responsible for the ongoing maintenance and administration of the new system, and it will finalize and deliver the system documentation.

Deliverables:

- ***Implemented system***
- ***User training meeting***
- ***Knowledge transfer meeting***
- ***System documentation***

4.3.5.4 Flow data related to Phase II of the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule from local NDEP source data systems.

With the new e-Reporting Rule in place, many state agencies are ramping up to flow this data. Windsor is well positioned to support NDEP with NPDES e-Reporting and we are currently under contract with several other state agencies for this upgrade. Again, the approach to this data flow would largely mirror the approach outlined above for data flow projects.

4.3.6 Vendors must demonstrate prior experience working with the Exchange Network and successfully implementing data flows. In addition, the awarded vendor must possess demonstrated qualifications related to:

Windsor has been providing Exchange Network support to the public sector since the inception of the Exchange Network. Windsor implemented the first functional node on the Exchange Network for the Washington Department of Ecology in 2003. Since that time, Windsor has become the clear leader with regard to Exchange Network technology development, flow implementation, and policy. Windsor participates in many of the committees and advisory groups that drive the technology and direction of the Exchange Network, including the Network Technology Group (NTG) and several Integrated Project Teams (IPTs). In addition, Windsor has been selected on three separate occasions to perform

support tasks as the States' Exchange Network General Support consultant under contract to the Environmental Council of States (ECOS). Windsor's responsibilities generally entailed further refinement of the principles and technology of the Exchange Network, and specifically included the definition of XML schemas and guidance documents, conducting knowledge transfer presentations, and other tasks as directed by ECOS.

Another example of Windsor's experience providing technical advice to exchange developers and implementers is through Windsor's participation in the schema package review process. Since 2006, Windsor reviewed over two dozen flow documentation packages including schema, FCDs, DETs and other materials. Each review resulted in a review summary document that listed the critical and non-critical issues with each component. Flow packages reviewed include:

- ***AQS v2.0***
- ***ATTAINS***
- ***Beach Notification v2.0 and v2.1***
- ***Biodiversity v0.9***
- ***CAFO v1.0***
- ***CERS v1.0***
- ***EMTS v1.0***
- ***ICIS-Air***
- ***ICIS-NPDES***
- ***MNRAD v1.0 and v1.1***
- ***NetDMR v1.0***
- ***NHDUpdate v1.0***
- ***NPS_BMP v1.0***
- ***Open Dump v1.0***
- ***RCRA v3.0 and v4.0***
- ***SRS v1.0 and v3.0***
- ***TRI v2.0 and v4.0***
- ***UIC v1.0***
- ***WQX v1.0, v2.0, and v2.1***

In many cases, Windsor was able to identify significant issues in either the schema or exchange design, often resulting in the release of revised packages that much closer align with Network rules and guidelines.

Windsor has not only demonstrated our understanding of and adherence to network policies through our exchange design and implementation work, Windsor has been instrumental in helping Network governance develop new and revised documentation. Windsor has contributed largely to the following Network policies, procedures and guidance materials:

- ***Trading Partner Agreement guidance document***
- ***Exchange Design and Best Practices document***
- ***Flow Documentation Package Conformance Review Template***

Probably the most significant demonstration of this strength is Windsor's contribution to the XML Design Rules and Conventions (DRCs). Windsor developed the Interim Update to the DRCs (v1.1) and more recently, led the development of a complete overhaul of the DRCs (v2.0) as well as the development of the all-new Exchange Design Rules and Conventions (EDRC v1.0).

In addition, Windsor has been an active participant and contributor in the development of many new Network guidance and policy initiatives including:

- ***Development of Node v1.1 and Node v2.0 specifications***
- ***Development of ENDS documentation***
- ***Development of Header 2.0 documentation***
- ***Development of guidance for integration of geographic location into Network schema***
- ***Policy and guidelines related to the use of shared schema components, component versioning, and namespaces in schema***

As the ECOS support contractor for the past several years, Windsor has regularly attended and participated on NTG bi-weekly calls and face to face meetings. In this capacity Windsor has provided advice and input on technical, procedural, operational and communications issues, and provided advice on ways to improve the schema review process by streamlining the work performed by both exchange developers and package reviewers.

4.3.7 .NET programming,

Windsor has substantial experience developing .NET solutions. Over 70% of Windsor's work is .NET based with the remaining work utilizing the Java stack. Windsor developed both a .NET and a Java based node that demonstrates our capabilities in both technologies. Other .NET project examples are as follows.

1) ***The Well Construction Unit (WCU) at Michigan Department of Natural Resources and Environment (DNRE) Water Bureau tracks the drilling and plugging of water wells in the State of Michigan. The WCU operates a web-based system that allows water well drilling contractors, health department staff, and DNRE staff to enter and maintain well records. The existing system, in operation since 2000, no longer met the business needs of the WCU and the technology had become antiquated.***

   DNRE contracted with Windsor to redevelop and enhance the system, bringing it up to date with the latest technology and current business practices. The application was redeveloped using ASP.NET 3.5, SQL Server 2005, and SQL Server Reporting Services. Both jQuery and SPRING.NET were used to create an appealing user experience and to allow for flexible deployment and maintenance.

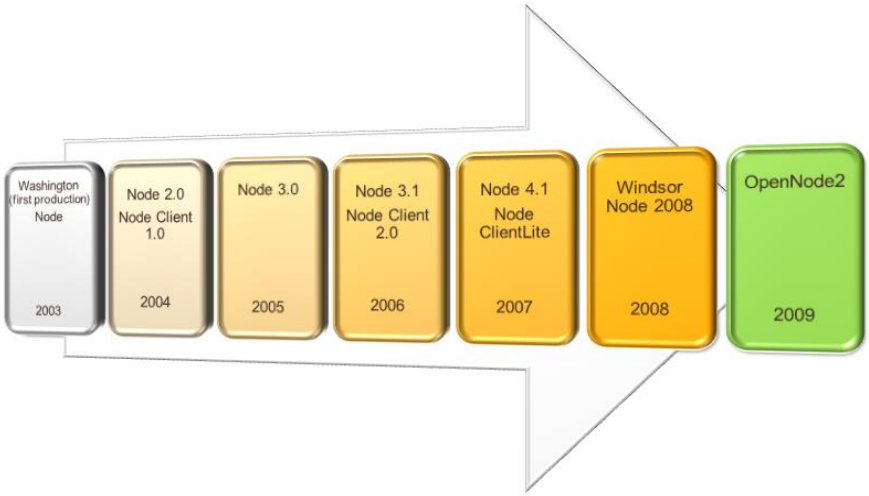
2) ***The State and Local Emissions Inventory System (SLEIS) Consortium and Windsor Solutions engaged in a project to analyze, design, build, and implement a Web-based, point source emissions inventory reporting and database management system that meets the needs of state and local governments for collecting emissions inventory data from regulated entities, managing and reviewing emissions inventory data, and submitting emissions inventory data to the EPA.***

   This project allows regulated entities to submit point source emissions inventory data and other pertinent information to SLEIS consortium members via a .NET Web-based, CROMERR-compliant reporting system. Users are able to manage and review collected data, including the quality assurance of emissions inventory data submitted by regulated entities. The system also includes an integrated Exchange Network Node Client interface to generate CERS XML files and submit them to the EPA EIS Node environments.

   SLEIS has been implemented in approximately 15 different local, county, and state environmental agencies to date.

4.3.8 Development of web services that enable data to be shared over the internet in an XML format.

Windsor has been involved in the development of web services that enable data to be shared over the internet in an XML format since the inception of the Exchange Network. Beginning in 2003 when Windsor was the first company to implement a fully functional and operational node, Windsor has built on this experience by providing many new and upgraded versions of the Node. The following graphic shows a timeline of Windsor's involvement in the delivery of new node and inherent in that is Windsor's experience delivering web services.



4.3.9 Develop database systems to replace legacy environmental information systems.

Since being founded in 1998 Windsor has provided customized environmental information systems to its clients. These systems have typically been developed to replace legacy applications and include the establishment of supporting databases.

As an example, The Michigan Department of Environmental Quality (MDEQ) Resource Management Division (RMD) contracted Windsor to perform a multi-phased project for the development of an integrated cross-program waste management system. Prior to this project the Division maintained nine separate internal information systems in addition to staff having to hand-key data into EPA's Resource Conservation and Recovery Act Information (RCRAInfo) system for the management of hazardous waste information.

The current implementation of the Waste Data System is a web based application based on the Microsoft .NET Framework with data being managed and reported upon using the Microsoft's SQL Server platform and its associated services (Reporting Services, Integration Services). The application is available both internally and publicly with sensitive data being removed from the publicly available version. The division has found that making the data publicly available has resulted in a significant decrease in the number of information requests submitted by the public, freeing up resource-limited staff to address other pressing matters.

Programmatically, the Waste Data System manages data for the following areas:

- ***RCRA Hazardous Waste Generation and Management***

- ***RCRA Hazardous Waste Manifesting***
- ***Hazardous Waste and Liquid Industrial Waste Transporters***
- ***Solid Waste Management***
- ***Scrap Tires***

Data for both the Site Identification and the Compliance Monitoring and Enforcement activities are managed in a cross-programmatic manner. This allows staff and the public to have an integrated view of the regulated activities and compliance history at a site. The Waste Data System also has implemented a proven approach to submitting data through the Exchange Network to EPA's Central Data Exchange (CDX) for incorporation into RCRAInfo. Each of the corresponding modules within the Waste Data System was designed with this objective in mind and the MDEQ has been successfully translating data to RCRAInfo since 2001 (originally flat files).

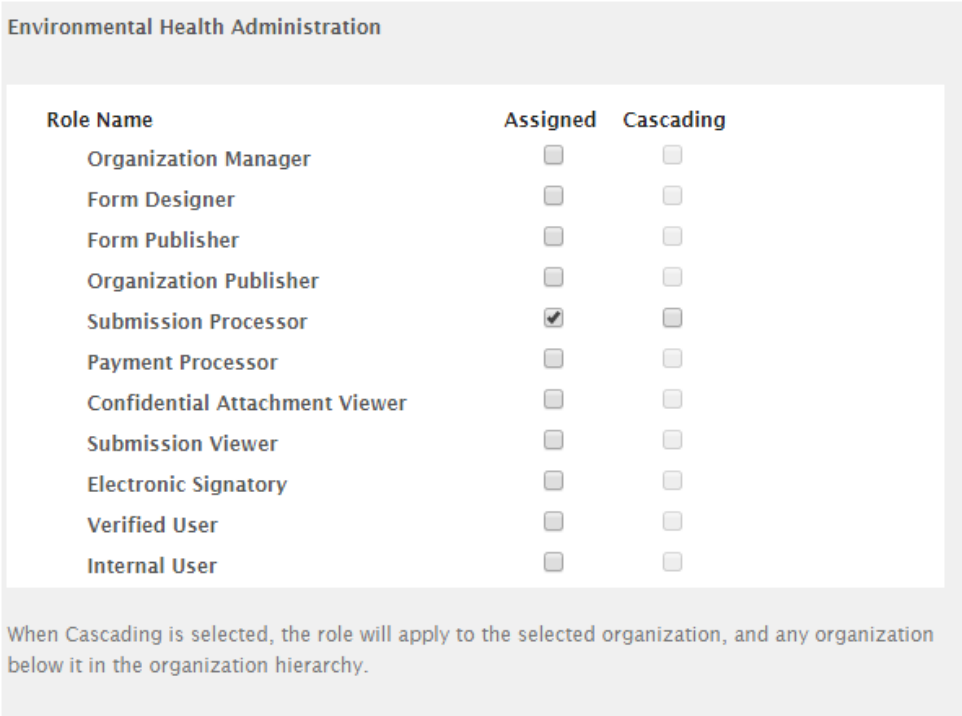
4.3.10 Develop systems that will have a functional audit trail.

Windsor includes audit trails within its provided solutions based upon the expressed needs of the client. Typically, all entities contain created by and last updated user and timestamps. Major entities may then also have field auditing (who changed, when, old value, new value).

4.3.11 Develop systems that will limit access to authorized users.

Windsor's developed applications include authentication and authorization capabilities per the requirements of the project and client. Windows authentication and form authentication are commonly adopted to provide this capability, however Windsor also has the ability and experience establishing single sign-on solutions.

Authorization is also established to satisfy the project needs and typically adopts a principal/role/group approach. Windsor's nForm solution utilizes the principal/role/group approach to authorization. The following screen shot illustrates how and individual is assigned to a particular security role.



4.3.12 Develop systems that will incorporate validity data checks.

Windsor's deployed applications incorporate validity data checks as a matter of course. As part of our standard SDLC business rules are identified that then support the validation checks on data.

4.3.13 Development of systems that will respond to abnormal conditions and produce error logs.

Windsor designs systems with the intent of handling abnormal conditions gracefully; however, identifying all the circumstances under which an error may occur is a daunting and costly task. Windsor utilizes a combination of error logs and a static page to communicate errors in a friendly manner and one in which better guidance can be provided to the user.

4.3.14 Any resulting contract will serve as a master contract for Exchange Network services. The Division will issue a task order for a particular service; and, within ten (10) days, the awarded vendor will provide a proposed scope of work including a schedule and cost information. The work will commence when the Division issues written approval of the proposed scope of work, schedule and cost for the specified task.

Windsor is accustomed to the task order approach to the provision of services and will work with NDEP to turn around responses to task orders within 10 business days of request.

4.4 FUNCTIONAL REQUIREMENTS

Transmit environmental data from Nevada Division of Environmental Protection local source systems to federal databases via National Environmental Information Exchange Network.

Windsor will utilize the latest version of OpenNode2 to support this requirement. OpenNode2 is the most widely used node in the exchange network. As the originator of OpenNode2 Windsor is ideally positioned to support the continued participation of NDEP in the exchange network. As data exchange technology changes in the future, Windsor will remain on the forefront of this technology as a member

of the Network Technology Group (NTG) and our continued involvement as the Exchange Network General Support Contractor with ECOS.

4.5 SECURITY STANDARDS

4.5.1 System must meet State security standards for transmission of personal information as outlined in NRS 205.4742 and NRS 603A.

Windsor will work with NDEP to ensure that systems falling within this contact mechanism satisfy the State security standards. Where security modification become necessary to existing applications, Windsor and NDEP will establish the appropriate task orders to address the desired modifications.

For future work, Windsor would incorporate a review process to evaluate compliance of the completed work with the State's security standards.

4.5.2 Protection of sensitive information will include the following:

4.5.2.1 Sensitive information in existing legacy applications will encrypt data as is practical.

Agreed, where necessary and as agreed upon between Windsor and NDEP, Windsor will encrypt sensitive data.

4.5.2.2 Confidential Personal Data will be encrypted whenever possible.

Agreed, where necessary and as agreed upon between Windsor and NDEP, Windsor will encrypt confidential personal data

4.5.2.3 Sensitive Data will be encrypted in all newly developed applications.

Agreed, where necessary and as agreed upon between Windsor and NDEP, Windsor will encrypt sensitive data

4.5.3 All information technology services and systems developed or acquired by agencies shall have documented security specifications that include an analysis of security risks and recommended controls (including access control systems and contingency plans).

Windsor will work with NDEP to ensure that security specifications are documented including an analysis of security risks and recommended controls (including access control systems and contingency plans).

4.5.4 Security requirements shall be developed at the same time system planners define the requirements of the system. Requirements must permit updating security requirements as new threats/vulnerabilities are identified and/or new technologies implemented.

Windsor will ensure that security requirements are developed at the same time system planners define the requirements of the system.

4.5.5 Security requirements and evaluation/test procedures shall be included in all solicitation documents and/or acquisition specifications.

Windsor will look for and request security requirements and evaluation/test procedures within future solicitation / acquisition specifications.

4.5.6 Systems developed by either internal State or contracted system developers shall not include back doors, or other code that would cause or allow unauthorized access or manipulation of code or data.

Windsor will ensure that no back doors are included that would allow unauthorized access or manipulation of code or data.

4.5.7 Security specifications shall be developed by the system developer for approval by the agency owning the system at appropriate points of the system development or acquisition cycle.

Windsor will work with NDEP to establish the appropriate points within the system development life cycle at which security specifications will be reviewed and approved.

4.5.8 All system development projects must include a documented change control and approval process and must address the security implications of all changes recommended and approved to a particular service or system. The responsible agency must authorize all changes.

Windsor's standard SDLC incorporates change control processes. Windsor will ensure that any change control items will take into account security implications. Windsor will seek authorization for changes from NDEP.

4.5.9 Application systems and information that become obsolete and no longer used must be disposed of by appropriate procedures. The application and associated information must be preserved, discarded, or destroyed in accordance with Electronic Record and Record Management requirements defined in NRS and NAC 239, Records Management.

Should Windsor be requested to support the disposal process for any obsolete systems then this will be performed in accordance with the Electronic Record and Record Management requirements defined in NRS and NAC 239, Records Management.

4.5.10 Software development projects must comply with State Information Security Consolidated Policy 100, Section 4.7, Software Development and Maintenance and State Standard 131, "Security for System Development".

Windsor will work with NDEP to ensure that projects comply with State Information Security Consolidated Policy 100, Section 4.7, Software Development and Maintenance and State Standard 131, "Security for System Development".

4.5.10.1Separate development, test and production environments must be established on State systems.

Windsor will work with NDEP to ensure that separate development, test and production environments are established on State systems.

4.5.10.2Processes must be documented and implemented to control the transfer of software from a development environment to a production environment.

Together with NDEP Windsor will establish the appropriate processes to control the transfer of software from development to production environments.

4.5.10.3Development of software and tools must be maintained on computer systems isolated from a production environment.

Windsor will work with NDEP to ensure that the development software and tools is located and maintained on a system isolated from the production environment.

4.5.10.4Access to compilers, editors and other system utilities must be removed from production systems.

Windsor will work with NDEP staff to ensure that access to compilers, editors and other system utilities is removed from production systems.

4.5.10.5Controls must be established to issue short-term access to development staff to correct problems with production systems allowing only necessary access.

Windsor will work with NDEP staff to establish the protocols whereby short-term access to development staff can be granted to correct problems with production systems allowing only necessary access

4.5.10.6Security requirements and controls must be identified, incorporated in and verified throughout the planning, development, and testing phases of all software development projects. Security staff must be

included in all phases of the System Development Lifecycle (SDLC) from the requirement definitions phase through implementation phase.

Windsor will work with NDEP to ensure that Security staff are included in all phases of the System Development Lifecycle (SDLC) from the requirement definitions phase through implementation phase. Security checkpoints will be incorporated into the SDLC to ensure ample time for review and revision of security requirements.

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Tab VII – Section 5, Scope of Work

Vendors must place their written response(s) in ***bold/italics*** immediately following the applicable RFP question, statement and/or section.

5.1 VENDOR RESPONSE TO SCOPE OF WORK

5.1.2 Within the proposal, vendors must provide information regarding their approach to meeting the requirements described within ***Sections 5.4 through 5.5***.

5.1.3 If subcontractors will be used for any of the tasks, vendors must indicate what tasks and the percentage of time subcontractor(s) will spend on those tasks.

5.1.4 Vendor's response must be limited to no more than five (5) pages per task not including appendices, samples and/or exhibits.

No response to Section 5.1 required.

5.2 DELIVERABLE SUBMISSION AND REVIEW PROCESS

Once the detailed project plan is approved by the State, the following sections detail the process for submission and review of deliverables during the life of the project/contract.

5.2.1 General

5.2.1.1 The contractor must provide one (1) master (both hard and soft copies) and four (4) additional hard copies of each written deliverable to the appropriate State Project Manager as identified in the contract.

5.2.1.2 Once a deliverable is approved and accepted by the State, the contractor must provide an electronic copy. The State may, at its discretion, waive this requirement for a particular deliverable.

5.2.1.3 The electronic copy must be provided in software currently utilized by the agency or provided by the contractor.

5.2.1.4 Deliverables will be evaluated by the State utilizing mutually agreed to acceptance/exit criteria.

5.2.2. Deliverable Submission

5.2.2.1 Prior to development and submission of each contract deliverable, a summary document containing a description of the format and content of each deliverable will be delivered to the State Project Manager for review and approval. The summary document must contain, at a minimum, the following:

A. Cover letter;

B. Table of Contents with a brief description of the content of each section;

C. Anticipated number of pages; and

D. Identification of appendices/exhibits.

5.2.2.2 The summary document must contain an approval/rejection section that can be completed by the State. The summary document will be returned to the contractor within a mutually agreed upon time frame.

5.2.2.3 Deliverables must be developed by the contractor according to the approved format and content of the summary document for each specific deliverable.

5.2.2.4 At a mutually agreed to meeting, on or before the time of delivery to the State, the contractor must provide a walkthrough of each deliverable.

5.2.2.5 Deliverables must be submitted no later than 5:00 PM, per the approved contract deliverable schedule and must be accompanied by a deliverable sign-off form ***(Attachment G, Project Deliverable Sign Off Form)*** with the appropriate sections completed by the contractor.

5.2.3 Deliverable Review

5.2.3.1 General

A. The State's review time begins on the next working day following receipt of the deliverable.

B. The State's review time will be determined by the approved and accepted detailed project plan and the approved contract.

C. The State has up to five (5) working days to determine if a deliverable is complete and ready for review. Unless otherwise negotiated, this is part of the State's review time.

D. Any subsequent deliverable dependent upon the State's acceptance of a prior deliverable will not be accepted for review until all issues related to the previous deliverable have been resolved.

E. Deliverables determined to be incomplete and/or unacceptable for review will be rejected, not considered delivered and returned to the contractor.

F. After review of a deliverable, the State will return to the contractor the project deliverable sign-off form with the deliverable submission and review history section completed.

5.2.3.2 Accepted

A. If the deliverable is accepted, the original deliverable sign-off form signed by the appropriate State representatives will be returned to the contractor.

B. Once the contractor receives the original deliverable sign-off form, the State can then be invoiced for the deliverable ***(Section 8, Financial).***

5.2.3.3 Comments/Revisions Requested by the State

If the State has comments and/or revisions to a deliverable, the following will be provided to the contractor:

A. The original deliverable sign-off form with an updated entry to the deliverable submission and review history section.

B. Attached to the deliverable sign-off form will be a detailed explanation of the revisions to be made and/or a marked up copy of the deliverable.

C. The State's first review and return with comments will be completed within the times specified in the contract.

D. The contractor will have five (5) working days, unless otherwise mutually agreed to, for review, acceptance and/or rejection of the State's comments.

E. A meeting to resolve outstanding issues must be completed within three (3) working days after completion of the contractor's review or a mutually agreed upon time frame.

F. Agreements made during meetings to resolve issues must be documented separately.

G. Once an agreement is reached regarding changes, the contractor must incorporate them into the deliverable for resubmission to the State.

H. All changes must be easily identifiable by the State.

I. Resubmission of the deliverable must occur within five (5) working days or a mutually agreed upon time frame of the resolution of any outstanding issues.

J. The resubmitted deliverable must be accompanied by the original deliverable sign-off form.

K. This review process continues until all issues have been resolved within a mutually agreed upon time frame.

L. During the re-review process, the State may only comment on the original exceptions noted.

M. All other items not originally commented on are considered to be accepted by the State.

N. Once all revisions have been accepted, the original deliverable sign-off form signed by the appropriate State representatives will be returned to the contractor.

O. The contractor must provide one (1) updated and complete master paper copy of each deliverable after approval and acceptance by the State.

P. Once the contractor receives the original deliverable sign-off form, the State can then be invoiced for the deliverable ***(refer to Section 8, Financial)***.

5.2.3.4 Rejected, Not Considered Delivered

If the State considers a deliverable not ready for review, the following will be returned to the contractor:

A. The original deliverable sign-off form with an updated entry to the deliverable submission and review history section.

B. The original deliverable and all copies with a written explanation as to why the deliverable is being rejected, not considered delivered.

C. The contractor will have five (5) working days, unless otherwise mutually agreed to, for review, acceptance and/or rejection of the State's comments.

D. A meeting to discuss the State's position regarding the rejection of the deliverable must be completed within three (3) working days after completion of the contractor's review or a mutually agreed upon time frame.

E. Resubmission of the deliverable must occur within a mutually agreed upon time frame.

F. The resubmitted deliverable must be accompanied by the original deliverable sign-off form.

G. Upon resubmission of the completed deliverable, the State will follow the steps outlined in ***Section 5.2.3.2, Accepted,*** or ***Section 5.2.3.3, Comments/Revisions Requested by the State***.

No response to Section 5.2 required.

5.3 PROJECT KICK OFF MEETING

A project kick off meeting will be held with representatives from the State and the contractor after contract approval and prior to work performed. Items to be covered in the kick off meeting will include, but not be limited to:

5.3.1 Deliverable review process;

5.3.2 Determining format and protocol for project status meetings;

5.3.3 Determining format for project status reports;

5.3.4 Setting the schedule for meetings between representatives from the State and the contractor to develop the detailed project plan;

5.3.5 Defining lines of communication and reporting relationships;

5.3.6 Reviewing the project mission;

5.3.7 Pinpointing high-risk or problem areas; and

5.3.8 Issue resolution process.

No response to Section 5.3 required.

5.4 PLANNING AND ADMINISTRATION

5.4.1 Objective

The objective of this task is to ensure that adequate planning and project management are dedicated to this project.

5.4.2 Activities

The awarded vendor must:

5.4.2.1 Work with the State to provide a detailed project plan with fixed deadlines that take into consideration the State holiday schedule provided in ***Section 2.1, State Observed Holidays*** to include, but not be limited to:

A. Project schedule including tasks, activities, activity duration, sequencing and dependencies;

B. Project work plan for each deliverable, including a work breakdown structure;

C. Completion date of each task;

D. Project milestones;

E. Entrance and exit criteria for specific project milestones; and

F. Project organization including a resource plan defining roles and responsibilities for the awarded vendor, subcontractors (if applicable) and State.

5.4.2.2 Attend and participate in all project related meetings requested by the State at a location to be determined by the State. Attendance may be in person or via teleconferencing, as mutually agreed to by the project team.

5.4.2.3 Provide written semi-monthly project status reports delivered to State project management by the third (3rd) working day following the end of each reporting period. The format must be approved by the State prior to issuance of the first semi-monthly project status report. The first semi-monthly report covers the reporting period from the 1st through the 15th of each month; and the second semi-monthly report covers the reporting period from the 16th through the end of the month. The status reports must include, but not be limited to the following:

A. Overall completion status of the project in terms of the State approved project work plan and deliverable schedule;

B. Accomplishments during the period, including State staff/stakeholders interviewed, meetings held, JAD sessions and conclusions/decisions determined;

C. Problems encountered and proposed/actual resolutions;

D. What is to be accomplished during the next reporting period;

E. Issues that need to be addressed, including contractual;

F. Quality Assurance status;

G. Updated MS Project time line showing percentage completed, tasks assigned, completed and remaining;

H. Identification of schedule slippage and strategy for resolution;

I. Contractor staff assigned and their location/schedule;

J. State resources required for activities during the next time period; and

K. Resource allocation percentages including planned versus actual by project milestone.

5.4.3 Deliverables

5.4 PLANNING AND ADMINISTRATION DELIVERABLES			
DELIVERABLE NUMBER	**DESCRIPTION OF DELIVERABLE**	**ACTIVITY**	**STATE'S ESTIMATED REVIEW TIME (WORKING DAYS)**
5.4.3.1	Detailed Project Plan	5.4.2.1	15
5.4.3.2	Attendance at all scheduled meetings	5.4.2.2	N/A
5.4.3.3	Written Semi-Monthly Project Status Report	5.4.2.3	5

Windsor agrees to comply with the requirements in Section 5.4 and will provide project planning and administration services in line with the tasks requested. Preliminary cost estimates for the detailed project plan are presented in the separate Cost Proposal volume as directed by the RFP.

5.5 FLOW COMPONENTS

5.5.1 Objective

The objective of this task is to review the NDEP infrastructure and data associated with the environmental data. Based on this review, develop a node implementation plan.

5.5.2 Activities

5.5.2.1 Design flow components

A. Develop a node implementation plan

5.5.2.2 Develop flow components

A. Develop, install and configure software necessary to perform the required web services.

B. Map the middleware to the production data.

5.5.2.3 Test flow components

A. Test the system functionality and troubleshoot any problems.

5.5.2.4 Implement flow components

A. Prepare flow configuration documentation to provide technical details that describe the data methodology and procedures.

B. Provide on-site training to Division IT staff to enable maintenance and troubleshooting of the Node.

5.5.3 Deliverables

5.5 FLOW COMPONENTS			
DELIVERABLE NUMBER	**DESCRIPTION OF DELIVERABLE**	**ACTIVITY**	**STATE'S ESTIMATED REVIEW TIME (WORKING DAYS)**
5.5.3.1	Develop a node implementation plan	5.5.2.1	20
5.5.3.2	Develop, install and configure software for required web services	5.5.2.2A	60
5.5.3.3	Map middleware to production data	5.5.2.2	20
5.5.3.4	Test system functionality and troubleshoot any problems	5.5.2.3	14
5.5.3.5	Prepare flow configuration documentation to provide technical details	5.5.2.4A	7
5.5.3.6	Provide on-site training	5.5.2.4B	1

Windsor will provide flow component services in line with the task requested. Windsor's approach to providing data flows is consistent with the approach requested.

The task objective is somewhat inconsistent with the described task activities, making it unclear as to how to respond. The objective describes a review and establishment of an implementation plan, while the activities imply the execution of an implementation plan.

Windsor assumes that NDEP therefore wishes to perform the review of the NDEP infrastructure and data associated with the environmental data followed by the establishment

of an implementation plan and subsequent execution of the developed plan. The scope of such an implementation plan will be dependent heavily upon the findings of the review.

Furthermore, the extent of the requested review of the NDEP infrastructure and data associated with the environmental data is unclear. The following approach therefore assumes an initial high level review of the NDEP node infrastructure and environmental data included within existing flows. The actual review may extend more broadly or be narrower than that described.

The approach and associated estimates should therefore be treated as a guide since the specifics of the task must be established in further detail in order to firm up the scope and estimates.

Each data flow and source system presents its own complications and requirements. As such, an example data flow is used to provide a guide and illustration in terms of the approach which would typically be followed for satisfying the activities described within section 5.5.2 of this RFP. It should be noted that the complexity of any given data flow implementation can vary widely. For this example, the ICIS-Air data flow (which is generally considered a somewhat complicated flow) has been selected.

The following provides an example of the approach that would be followed to develop, test and implement a [ICIS-Air] data flow.

Initiate Project

Develop Project Plan

A project plan will be developed that details the project tasks and schedule, including a detailed work breakdown structure. The plan will describe the timing and expected level of effort required from all parties throughout the project.

Deliverable(s)

- ***Project plan document***

Hold Project Kickoff Meeting

A conference call will be held with the project team to review the project plan, proposed schedule, and initial risk assessment. This meeting will also be used to ensure that all project participants understand the goals of the project, the expected outcomes, and their roles and responsibilities.

Deliverable(s)

- ***Project kickoff meeting***

Review Node Infrastructure (5.5.2.1 Design flow components)

Hold Infrastructure Review Meeting

An onsite meeting will be held with NDEP staff to review the existing NDEP infrastructure and data associated with the environmental data. Current Node configuration, versioning and deployment environments will be discussed and catalogued, including the status of all existing data flows and data flow components that are present within those environments.

Deliverable(s)

- ***Infrastructure Review Meeting***

Develop Node Implementation Plan

Based upon information determined within the Infrastructure Review Meeting, Windsor will establish the appropriate path forward to upgrade the node infrastructure accordingly. This will ensure that the appropriate environments are established for development, testing and production for successful future operation of the node within the exchange network. Each of the current flows will be included within the implementation plan to ensure that they are upgraded to the latest versions and are consistent with NDEP goals. Future planned data flows will be included based upon direction of NDEP staff.

Deliverable(s)

- ***Node Implementation Plan***

NOTE: The remainder of this approach focuses specifically on a single data flow. This approach would be reused to address other flows. The actual activities performed may vary by data flow.

Design ICIS-Air Data Flow (5.5.2.1 Design flow components)

Hold Design Meeting

Windsor will facilitate meetings with NDEP staff to confirm the data submission and verification work flow process for ICIS-Air.

The current expectation is that Windsor will develop Oracle database procedures that will extract the required data from the ARIS database and will migrate this data into the plugin staging database.

This workflow will be confirmed and the appropriate technical architecture will be agreed.

Deliverable(s)

- ***Data flow design meeting***

Map Data Flow

Windsor will facilitate additional meetings with NDEP staff to map the data managed in the ARIS database to the ICIS-Air Data Exchange Template (DET) and XML schema for each of the data submission types that will be submitted.

This data mapping exercise will need to consider each of the data extraction steps that will be involved in the process, and the format of the data that will be returned by the extract routines.

This mapping will be used to guide the development of the data extraction procedures. It will also direct data cleaning tasks to be conducted by NDEP staff that may be needed to meet ICIS business rules.

Deliverable(s)

- ***Data flow mapping***

Develop Data Flow Design Documents

Windsor will document the intended ICIS-Air data flow design, and will finalize a detailed mapping specification that will be used to develop the data extraction logic. The design documentation will also describe any data cleaning activities that will be required within the NDEP system.

Deliverable(s)

- ***Draft data flow design document***

Review Design Documents

The data flow design documents will be reviewed by NDEP and questions and issues will be resolved.

Deliverable(s)

- ***Final data flow design document***

Hold Design Project Checkpoint Meeting

Windsor will meet with the NDEP project team to discuss any major roadblocks or issues that need to be addressed. This meeting will also be used to review the project scope and plan subsequent development, testing and implementation activities.

There is a chance that ICIS-Air data flow design activities will reveal issues in the source data in the NDEP system that cannot be resolved by data cleaning activities alone. This meeting will discuss any changes that may therefore be required to the scope of data families to be submitted through the data flow.

The project schedule will be revised as necessary to accommodate data cleaning and any other changes that may be required.

Deliverable(s)

- ***Design checkpoint meeting***

Develop ICIS-Air Data Flow (5.5.2.2 Develop flow components)

Develop Data Load Procedures

Windsor will develop database procedures to extract, transform and load data from the ARIS database to populate the OpenNode2 ICIS-Air data flow staging tables.

Deliverable(s)

- ***Data load procedures***

Support Data Cleaning

The Design Document will specify any data cleaning activities that will be required in the ARIS database. Additional data cleaning needs will likely be determined during data flow testing.

NDEP staff will be responsible for conducting data cleaning tasks to update any data contained in the database to be compliant with ICIS-Air business rules. Windsor will assist NDEP staff as required.

Deliverable(s)

- ***Data cleaning support***

System Test ICIS-Air Data Flow (5.5.2.3 Test flow components)

Install Data Flow in Test Environment

The NDEP OpenNode2 test and production instances will be updated to the latest available version if necessary.

The ICIS-Air data flow will be installed and configured in the NDEP OpenNode2 test environment. This will involve installing and configuring the OpenNode2 ICIS- Air plug-in(s) and the corresponding staging table environment.

Deliverable(s)

- ***Data flow installed in test environment***

Test Data Flow

The data flow will be locally tested using the NDEP OpenNode2 and data extracts from the test ARIS environment. Once local testing has been completed, test ICIS-Air submissions will be sent to EPA via CDX for testing and evaluation by the EPA. These testing tasks will be coordinated with EPA to avoid scheduled maintenance activities on the ICIS-Air system.

It is expected that multiple test submissions will be conducted to the ICIS-Air stage environment during this task to iteratively confirm that all data submission types meet ICIS- Air business rules.

Based on the testing results, Windsor will make modifications to the data extraction procedures as needed. NDEP staff will conduct additional data cleaning as needed.

Deliverable(s)

- ***Tested data flow***

Implement ICIS-Air Data Flow (5.5.2.4 Implement flow components)

Install Data Flow in Production Environment

The data flow will be deployed and enabled in the NDEP OpenNode2 production environment. Initial production submissions will be supported.

Windsor will provide a data flow implementation guide document and hold onsite training.

Deliverable(s)

- ***Data flow installed in production environment***
- ***Data flow implementation guide***
- ***Training***

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Tab VIII – Section 6 – Company Background and References

Vendors must place their written response(s) in ***bold/italics*** immediately following the applicable RFP question, statement and/or section. This section must also include the requested information in ***Section 6.2, Subcontractor Information***, if applicable.

6. COMPANY BACKGROUND AND REFERENCES

6.1 VENDOR INFORMATION

6.1.1 Vendors must provide a company profile in the table format below.

Question	Response
Company name:	***Windsor Solutions, Inc.***
Ownership (sole proprietor, partnership, etc.):	***S Corporation***
State of incorporation:	***Oregon***
Date of incorporation:	***May 20, 1998***
# of years in business:	***18***
List of top officers:	***Guy Outred, President*** ***Kevin Jeffery, Vice President*** ***Simon Watson, Vice President***
Location of company headquarters:	***Portland, Oregon***
Location(s) of the company offices:	***Portland, Oregon*** ***Northampton, Massachusetts***
Location(s) of the office that will provide the services described in this RFP:	***Portland, Oregon***
Number of employees locally with the expertise to support the requirements identified in this RFP:	***35***
Number of employees nationally with the expertise to support the requirements in this RFP:	***45***
Location(s) from which employees will be assigned for this project:	***Portland, Oregon***

6.1.2 Please be advised, pursuant to NRS 80.010, a corporation organized pursuant to the laws of another state must register with the State of Nevada, Secretary of State's Office as a foreign corporation before a contract can be executed between the State of Nevada and the awarded vendor, unless specifically exempted by NRS 80.015.

6.1.3 The selected vendor, prior to doing business in the State of Nevada, must be appropriately licensed by the State of Nevada, Secretary of State's Office pursuant to NRS76. Information regarding the Nevada Business License can be located at http://nvsos.gov.

Question	Response
Nevada Business License Number:	***NV20111356993; Expires 5/31/2017***
Legal Entity Name:	***Windsor Solutions, Inc.***

Is "Legal Entity Name" the same name as vendor is doing business as?

Yes	X	No	

If "No", provide explanation.

6.1.4 Vendors are cautioned that some services may contain licensing requirement(s). Vendors shall be proactive in verification of these requirements prior to proposal submittal. Proposals that do not contain the requisite licensure may be deemed non-responsive.

Windsor Response:
Agreed. Windsor will provide licensing information for any software projects that contain licensing requirements, whether those requirements involve Windsor-licensed software or third-party licenses.

6.1.5 Has the vendor ever been engaged under contract by any State of Nevada agency?

Yes	X	No	

If "Yes", complete the following table for each State agency for whom the work was performed. Table can be duplicated for each contract being identified.

Question	Response
Name of State agency:	***Nevada Department of Environmental Protection***
State agency contact name:	***Kevin Weiss***
Dates when services were performed:	***2002-Present***
Type of duties performed:	***Multiple projects with NDEP. Various Exchange Network projects including Node and Data Flow implementation. Flows include: WQX, SDWIS, EIS, TRI,***

Question	Response
	UIC, AQS, NetDMR, and ICIS-Air. In addition, Windsor has implemented the nSite Facility Profiler Data Warehouse and support as well as Water Quality Data Warehouse system and data viewer.
Total dollar value of the contract:	***$1,971,350 total NDEP projects Individual projects ranged from $1,000 to $364,000.***

6.1.6 Are you now or have you been within the last two (2) years an employee of the State of Nevada, or any of its agencies, departments, or divisions?

Yes		No	X

If "Yes", please explain when the employee is planning to render services, while on annual leave, compensatory time, or on their own time?

If you employ (a) any person who is a current employee of an agency of the State of Nevada, or (b) any person who has been an employee of an agency of the State of Nevada within the past two (2) years, and if such person will be performing or producing the services which you will be contracted to provide under this contract, you must disclose the identity of each such person in your response to this RFP, and specify the services that each person will be expected to perform.

6.1.7 Disclosure of any significant prior or ongoing contract failures, contract breaches, civil or criminal litigation in which the vendor has been alleged to be liable or held liable in a matter involving a contract with the State of Nevada or any other governmental entity. Any pending claim or litigation occurring within the past six (6) years which may adversely affect the vendor's ability to perform or fulfill its obligations if a contract is awarded as a result of this RFP must also be disclosed.

Does any of the above apply to your company?

Yes		No	X

If "Yes", please provide the following information. Table can be duplicated for each issue being identified.

Question	Response	
Date of alleged contract failure or breach:	***N/A***	
Parties involved:		
Description of the contract failure, contract breach, litigation, or investigation, including the products or services involved:		
Amount in controversy:		
Resolution or current status of the dispute:		
If the matter has resulted in a court case:	Court	Case Number
Status of the litigation:		

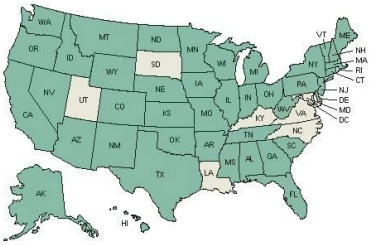
6.1.8 Vendors must review the insurance requirements specified in ***Attachment E, Insurance Schedule for RFP 3251.*** Does your organization currently have or will your organization be able to provide the insurance requirements as specified in ***Attachment E.***

Yes	X	No	

Any exceptions and/or assumptions to the insurance requirements ***must*** be identified on ***Attachment B, Technical Proposal Certification of Compliance with Terms and Conditions of RFP.*** Exceptions and/or assumptions will be taken into consideration as part of the evaluation process; however, vendors must be specific. If vendors do not specify any exceptions and/or assumptions at time of proposal submission, the State will not consider any additional exceptions and/or assumptions during negotiations.

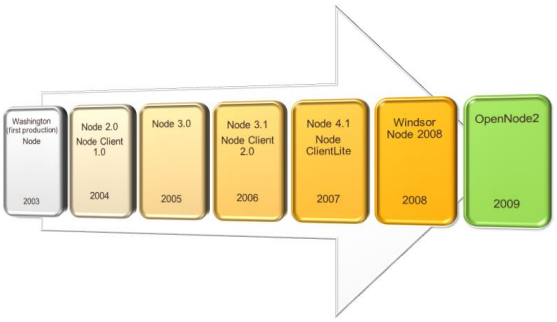
Upon contract award, the successful vendor ***must*** provide the Certificate of Insurance identifying the coverages as specified in ***Attachment E, Insurance Schedule for RFP 3251.***

6.1.9 Company background/history and why vendor is qualified to provide the services described in this RFP. Limit response to no more than five (5) pages.



Windsor is the leading Exchange Network contractor in the US. Windsor was founded in 1998 to specialize in the provision of environmental information systems to federal, state, local, and tribal government organizations. Since that time, we are proud to have developed an exceptional national reputation for the delivery of high quality solutions on time and within budget. As shown on the accompanying map, Windsor has successfully completed projects for agencies in nearly every state. We focus exclusively on the management and sharing of environmental and natural resources data with public-sector agencies at the federal, state, county, local, and tribal level. Our projects have ranged from a few thousand to several million dollars. Relevant projects can be viewed on our website at www.windsorsolutions.com.

Exchange Network Experience



What sets Windsor apart from all other IT consulting firms is our extensive experience with the Exchange Network. A key factor in the success of a National Environmental Information Exchange Network (Exchange Network) project is an in-depth knowledge of the program. In this respect, no other firm can match the depth and breadth of expertise that Windsor brings to the table. Windsor has been developing and implementing Network Nodes for partners since 2003, for both .NET and Java environments. During that time, our Node has evolved through multiple iterations to accommodate the advances in the underlying technologies, as well as Windsor's ever expanding experience with challenging and new and innovative data exchanges. The following figure illustrates this version evolution.

As a recognized leader in existing Exchange Network Node and data flow deployments, we believe that Windsor is able to bring the necessary experience and skills to successfully provide the services required for any NEIEN project. Windsor has been closely involved with the design and implementation of the Exchange Network from its inception through to the current functional revisions. Some of Windsor's specific achievements have been:

- ***The first engineers to successfully implement a fully functional production Node and the company with the most experience with production Node operation. The majority of the Exchange Network is now powered by Windsor developed tools and applications.***
- ***The first company selected from among all leading Network Node providers to support the open-source Exchange Network Node. Windsor's OpenNode2, already powering the majority of state Exchange Network partners, is now freely available as an open-source product.***
- ***Implementation of many regulatory environmental program data flows including RCRAInfo, EIS, AQS, OWIR-ATT, Beaches, FacID, ICIS-NPDES, SDWIS, TRI, UIC and WQX.***
- ***Implementation of many innovative new data exchanges between partners that have served to dramatically illustrate the potential and power of the Exchange Network, including eManifest, the Homeland Emergency Response Exchange (HERE), the Juvenile Migrant Salmon Exchange (JMX) and the Pacific Northwest Water Quality Data Exchange (PNWWQX).***

- ***Leaders in the advanced technologies and practical application of Web services, XML data exchange, data warehousing, and automated data cleansing.***
- ***Recent implementers of a Tribal "SuperNode" for the Northwest Indian Fisheries Commission (NWIFC), as well as the United South and Eastern Tribes (USET).***

Experience with OpenNode2 Installations

Windsor's latest Network Node solution was selected by a broad consortium of leading Network agencies during an open and competitive bid process that included all the leading Network Node solutions available. Windsor's latest generation open source Node, coined "OpenNode2," was funded through a 2008 multi-state Challenge Grant and allows states, counties, and tribal groups to exchange data with EPA and other Exchange Network partners at a substantially reduced cost. OpenNode2 is currently in production operation with a large number of Exchange Network partners and has proven to be a robust and reliable engine in a variety of configurations. OpenNode2 simultaneously supports both the 1.1 and 2.0 versions of the Node Specifications, and works in either .NET or Java environments and with a wide range of supporting databases including Oracle and SQL Server. OpenNode2 was officially announced and released to all Network Partners at the Exchange Network User Conference in Atlanta in April 2009 and has since been available for download.

OpenNode2 builds upon Windsor's long-standing support for the Exchange Network. The "build once – share many times" approach is consistent with Windsor's philosophy of encouraging reuse and collaboration among Network Partners. The selection of Windsor's solution validates our long-standing approach to the implementation challenges over the last several years and is another reason Windsor is behind the majority of Exchange Network Node deployments throughout the United States.

The table below lists selected deployments of Windsor Nodes on the Exchange Network. As the Node has been available as an open source product for several months now, other agencies and tribes unknown to Windsor have self-deployed OpenNode2, and these numbers are constantly increasing. The following table presents some (but by no means all) of the Exchange Network partners utilizing OpenNode2:

Selected Exchange Network Partners Utilizing Windsor's Node	
Alaska Department of Environmental Conservation	Nebraska Department of Environmental Quality
Arizona Department of Environmental Quality	Montana Department of Environmental Quality
Arkansas Department of Environmental Quality	Nevada Division of Environmental Protection
California Climate Action Registry	New Hampshire Department of Environmental Services
California Environmental Protection Agency	New Mexico Environment Department
Colorado Department of Public Health and Environment	New York Department of Environmental Conservation
Connecticut Department of Environmental Protection	New York Department of Health
Delaware Department of Natural Resources and Environmental Control	North Dakota Department of Health
Georgia Department of Natural Resources	Northwest Indian Fisheries Commission
Gulf of Maine Ocean Observing System	Ohio Environmental Protection Agency

Hawaii Department of Health	Oklahoma Department of Agriculture
Idaho Department of Water Resources	Oklahoma Department of Environmental Quality
Iowa Department of Natural Resources	Pollution Prevention Resource Council
Illinois Environmental Protection Agency	Snohomish County, Washington
Kansas Department of Agriculture	Stillaguamish Tribe of Indians
Kansas Department of Health and Environment	United South and Eastern Tribes
Commonwealth of Northern Mariana Islands Department of Environmental Quality	US Geological Survey
Massachusetts Department of Environmental Protection	Washington Department of Ecology
Minnesota Pollution Control Authority	Washington Department of Natural Resources
Missouri Department of Natural Resources	Wyoming Department of Environmental Quality

Experience Implementing Data Flows

Not only has Windsor been on the forefront of Node development but they have also been heavily involved in flow innovation, having being responsible for the development of several of the most successful data exchanges on the Network. Many of these exchanges are now available along with OpenNode2, which is provided along with plug-ins needed to implement the FRS, EIS, AQS, WQX, SDWIS, and RCRAInfo Handler, and many other data flows. Other more creative data flows that have been developed by Windsor include the HERE Network, the Pacific Northwest Water Quality Exchange, and e-Manifest.

Selected Projects

The following projects were selected to highlight Windsor's experience developing Exchange Network flows and a variety of projects that also involved integration with other data management systems similar to NDEP's. Windsor has also implemented OpenNode2 and a number of data flows for NDEP (discussed previously).

<u>Environmental Council of States – General Support Contract</u>

Windsor has been engaged by ECOS since 2004 to support the Network Steering Board (NSB) with various Exchange Network implementation efforts. As part of this engagement, Windsor has conducted many activities, including:

- ***Development of much of the Network's technical flow design policy and guidance documentation***
- ***Design of the Flow Configuration for the FRS data flow,***
- ***Design of the Flow Configuration for the RCRAInfo data flow,***
- ***Design of the Flow Configuration for the NEI data flow,***
- ***Design of an XML schema for the Toxics Release Inventory (TRI) data flow,***
- ***Design of an XML schema for the Concentrated Animal Feeding Operations (CAFO) data flow,***
- ***Development of marketing materials,***
- ***Representing ECOS and providing expert technical assistance to the development of the Network Node 2.0 Specifications.***
- ***General support to Network Steering Board institutions such as the Technical Resource***

Group.

- ***Assisting EPA with the development of flow capabilities, such as a RCRAInfo XML translator component***

Hawaii Department of Health, OpenNode2 and RCRAInfo Data Flow

Windsor Solutions partnered with the Hawaii Department of Health's Environmental Health Administration (EHA) to implement a RCRAInfo data flow between EHA and the United States Environmental Protection Agency (USEPA) using the Exchange Network. This data flow utilized the RCRAInfo version 5.2 data access services to exchange Handler and Compliance Monitoring and Enforcement (CME) data.

Prior to this project, EHA designed, developed and implemented an Environmental Health Warehouse (EHW). The EHW contains many hazardous waste handlers, including conditionally-exempt, small and large quantity generators. The EHW also includes hazardous waste transporters, Treatment, Storage, and Disposal (TSD) facilities, and handlers that reported used oil and universal waste activities. Previously, to populate the EHW the Solid and Hazardous Waste Branch (SHWB) performed a one-time data extract from the online RCRAInfo data access system utilizing USEPA's BARRT application. The SHWB had to manually replicate this approach each time it wanted updated data from RCRAInfo incorporated into the EHW, and as a result, the EHW often became outdated and less informative.

As a result of this project, the EHA Network Node simply requests the latest Handler and CME information from RCRAInfo on a scheduled basis and then use this information to automatically keep the EHW up-to-date through back-end processes.

Minnesota Pollution Control Agency, OpenNode2 and Data Flows

Windsor was engaged by the Minnesota Pollution Control Agency (MPCA) to conduct several Exchange Network related projects. With the first project, Windsor implemented a Network Node for the agency, with this Node being modeled on the Windsor Node 3.0 software previously implemented for other States. The Node was developed using the Microsoft .NET framework with an Oracle database to support its administrative functions.

Implementation of the Node was completed on schedule, together with parallel implementation of a data flow to the EPA FRS database. The later portion of the same project resulted in the implementation of the PCS DMR, NEI, and RCRAInfo data flows.

Of particular interest to the current project is the development and implementation of the DMR data flow for MPCA. The mechanism by which DMR data is transmitted to PCS is via the EPA XML Interim Data Exchange Format (IDEF). IDEF provides an alternate format to the legacy 80-column batch card format. To manage the exchange, Windsor developed and implemented a special tool called the Submission Management Utility (SMU). This tool allows MPCA DMR business experts the ability to control and audit the submission of DMR data to EPA. It also allows for custom data mapping scenarios to translate the complex setup of outfalls, parameters, effluent limits and DMR results into a format that is compatible with PCS and matches with the equivalent DMR setup for each permit in PCS. The SMU also offers a mechanism for business users to turn on or off the inclusion of specific permits in the flow. This enabled MPCA to slowly roll out the automated flow of DMR data to EPA, giving business experts the ability to carefully tune the data mapping on a permit-by-permit basis.

Windsor was again engaged by MPCA for a two-phase project. During the first phase, Windsor upgraded MPCA to the latest version of OpenNode2, upgraded the DMR flow to use the new XML format required by the EPA ICIS-NPDES system, and implemented a new Emissions Inventory System (EIS) data flow. The second phase was to support and maintain the flows implemented during phase 1,

and to identify and implement additional data flows based on a needs assessment performed by Windsor with MPCA. Through the phase two project and various amendments and extensions, Windsor upgraded MPCA from the old FRS flow to the new FacID flow, implemented the new ATTAINS flow to send data from MPCA's ADB database to EPA, upgraded the TRI flow, and upgraded and enhanced the RCRA v5.0 exchange. Windsor also provided support to MPCA staff to maintain the WQX data exchange and the node software in general. Lastly, Windsor provided a training class to MPCA technical staff on developing node plug-ins.

Most recently Windsor is working with the MPCA to perform additional data flow upgrades including the upgrade of Minnesota's RCRAInfo data flow.

Northwest Indian Fisheries Commission Super-Node and WQX/JMX Exchanges

Windsor has successfully completed a WQX Exchange project for the Northwest Indian Fisheries Commission (NWIFC). NWIFC is a consortium of twenty Indian tribes in western Washington whose role is to assist the tribes' natural resource activities and to provide efficiencies that would not otherwise be realized by the tribes when working independently. As such, the NWIFC applied for and received an Exchange Network Grant to develop a "Super-Node" of sorts which would allow tribes to exchange ambient water quality information amongst themselves as well as directly with the EPA or other partners.

The resulting system allows tribes to participate in a much greater level of data sharing than was previously available. The solution has helped to prove to some of the smaller partners that exchanging data on the Exchange Network does not require a complex or expensive system.

Designed specifically to meet the needs of the commission and its member tribes, this powerful exchange solution allows data providers to package and supply data to identified partners utilizing a number of methods and techniques, depending on the provider's technical environment, as well as being able to receive data back. All at a fraction of the cost it would take to deploy and test fully functional Nodes in all these locations.

Essentially Tribes and other smaller exchange participants can now cost-effectively participate in the Exchange Network.

Following the Super-Node project, Windsor and the NWIFC have expanded tribal data sharing and management with other important efforts. Under the sponsorship of the Puget Sound Partnership (PSP), Windsor worked with representatives from the NWIFC, Tribal Nations and the Washington Department of Fish & Wildlife (WDFW) to design and establish the Juvenile Migration Data Exchange (JMX). Using the Exchange Network, participants collaborated to standardize, integrate and exchange information as part of their shared efforts to monitor and restore the health of the Puget Sound watershed. The Exchange Network provided tools and approaches for data to be shared efficiently and securely over the Internet, providing real-time access to higher-quality data while saving time and resources for the partners.

This JMX focused on the use of the Exchange Network to collect and integrate Washington State's juvenile migrant salmon information. As part of the project, Windsor created a desktop client that allows the Tribal Partners to aggregate and share JMX data amongst participating partners and share this with Tribal Nations, NWIFC, WDFW, PSP and the National Oceanic and Atmospheric Administration's (NOAA's) National Marine Fisheries Service (NMFS).

6.1.10 Length of time vendor has been providing services described in this RFP to the public and/or private sector. Please provide a brief description.

Response:

Windsor has been providing IT consulting services to the public sector since 1998. Since 2003, when we implemented the very first operational Exchange Network Node for the Washington Department of Ecology, Windsor has been on the forefront of Exchange Network technology and remains the leading consultant in this area across the US.

6.1.11 Financial information and documentation to be included in ***Part III, Confidential Financial Information*** of vendor's response in accordance with ***Section 12.5, Part III – Confidential Financial***.

Response:

See Part III for this information.

6.2 SUBCONTRACTOR INFORMATION

6.2.1 Does this proposal include the use of subcontractors?

Yes		No	***X***

6.3 BUSINESS REFERENCES

6.3.1 Vendors should provide a minimum of five (5) business references from similar projects performed for private, state and/or large local government clients within the last five (5) years.

6.3.2 Business references must show a proven ability of:

6.3.2.1 Developing, designing, implementing and/or transferring a large scale application with public and/or private sectors;

6.3.2.2 Developing and executing a comprehensive application test plan;

6.3.2.3 Developing and implementing a comprehensive training plan;

6.3.2.4 Experience with comprehensive project management;

6.3.2.5 Experience with cultural change management;

6.3.2.6 Experience with managing subcontractors; and

6.3.2.7 Development and execution of a comprehensive project management plan.

6.3.3 Vendors must provide the following information for ***every*** business reference provided by the vendor and/or subcontractor:

The "Company Name" must be the name of the proposing vendor or the vendor's proposed subcontractor.

Reference #:	1 – Hawaii Department of Health		
Company Name:	Windsor Solutions		
Identify role company will have for this RFP project (Check appropriate role below):			
X	***VENDOR***		***SUBCONTRACTOR***
Project Name:	Master IT Services contract for Hawaii DOH		
Primary Contact Information			
Name:	Andy Matsumoto		
Street Address:	919 Ala Moana Blvd.		
City, State, Zip:	Honolulu, HI 96814		
Phone, including area code:	808-586-4641		
Facsimile, including area code:			
Email address:	andy.matsumoto@doh.hawaii.gov		
Alternate Contact Information			
Name:			
Street Address:			
City, State, Zip:			
Phone, including area code:			
Facsimile, including area code:			
Email address:			
Project Information			
Brief description of the project/contract and description of services performed:	Similar to the contract to be awarded via this RFP, Windsor holds a master IT services contract with the Hawaii DOH for various environmental IT services. Over 60 projects have been successfully completed under this master contract (actually two contracts – one original and one renewal, both awarded via competitive bid). Projects have ranged from Exchange Network		

	node and data flow projects to large-scale agency-wide e-permitting systems, water quality management systems, environmental data warehouse and data viewer projects, and CROMERR-compliant online forms management systems.
Original Project/Contract Start Date:	January 2009
Original Project/Contract End Date:	February 2014
Original Project/Contract Value:	$1,350,000
Final Project/Contract Date:	Ongoing; second contract awarded March 2014.
Was project/contract completed in time originally allotted, and if not, why not?	Yes
Was project/contract completed within or under the original budget / cost proposal, and if not, why not?	Yes

Reference #:	2 - Environmental Council of States (ECOS)		
Company Name:	Windsor Solutions		
Identify role company will have for this RFP project (Check appropriate role below):			
X	***VENDOR***		***SUBCONTRACTOR***
Project Name:	General Exchange Network Support Contract		
Primary Contact Information			
Name:	Greg McNelly		
Street Address:	50 F Street NW; Suite 350		
City, State, Zip:	Washington, DC 20001		
Phone, including area code:	202.266.4930		
Facsimile, including area code:			
Email address:	GMCNELLY@ECOS.ORG		
Alternate Contact Information			
Name:			
Street Address:			
City, State, Zip:			
Phone, including area code:			

Facsimile, including area code:	
Email address:	
Project Information	
Brief description of the project/contract and description of services performed:	General support for OpenNode2 exchange network node, associated data flow plugin development, general exchange network support including standards development, documentation, etc.
Original Project/Contract Start Date:	2009
Original Project/Contract End Date:	1/31/2015
Original Project/Contract Value:	$505,000
Final Project/Contract Date:	Ongoing; contract renewed through 2017
Was project/contract completed in time originally allotted, and if not, why not?	Yes
Was project/contract completed within or under the original budget / cost proposal, and if not, why not?	Yes

Reference #:	3 - Massachusetts Department of Environmental Protection		
Company Name:	Windsor Solutions		
Identify role company will have for this RFP project (Check appropriate role below):			
X	***VENDOR***		***SUBCONTRACTOR***
Project Name:	Underground Storage Tanks Data Management System		
Primary Contact Information			
Name:	Laurel Carlsen		
Street Address:	20 Riverside Drive		
City, State, Zip:	Lakeville MA 02347		
Phone, including area code:	508-946-2764		
Facsimile, including area code:			
Email address:	laurel.carlson@state.ma.us		
Alternate Contact Information			
Name:			
Street Address:			

City, State, Zip:	
Phone, including area code:	
Facsimile, including area code:	
Email address:	
Project Information	
Brief description of the project/contract and description of services performed:	CROMERR-compliant e-Reporting system for underground storage tanks; mobile inspections, full compliance/enforcement module, cloud hosted.
Original Project/Contract Start Date:	March 2014
Original Project/Contract End Date:	September 2015
Original Project/Contract Value:	$676,922
Final Project/Contract Date:	March 2019
Was project/contract completed in time originally allotted, and if not, why not?	Yes. Contract was amended/extended and additional functionality was added.
Was project/contract completed within or under the original budget / cost proposal, and if not, why not?	Yes; additional scope was added to the contract and additional budget was added to cover new functionality.

Reference #:	Oregon Department of Environmental Quality		
Company Name:	Windsor Solutions		
Identify role company will have for this RFP project (Check appropriate role below):			
X	***VENDOR***		***SUBCONTRACTOR***
Project Name:	ICIS-Air Data Exchange, other Exchange Network services		
Primary Contact Information			
Name:		Won Kim	
Street Address:		811 SW 6th Avenue	
City, State, Zip:		Portland OR 97204	
Phone, including area code:		503-229-6086	
Facsimile, including area code:			
Email address:		kim.won@deq.state.or.us	
Alternate Contact Information			
Name:			
Street Address:			
City, State, Zip:			

Phone, including area code:	
Facsimile, including area code:	
Email address:	
Project Information	
Brief description of the project/contract and description of services performed:	ICIS-Air Data Exchange - implementation of ICIS-Air flow on OpenNode2
Original Project/Contract Start Date:	May 2015
Original Project/Contract End Date:	August 2015
Original Project/Contract Value:	$54,000
Final Project/Contract Date:	January 2016
Was project/contract completed in time originally allotted, and if not, why not?	In the initial phases of the project it was discovered that DEQ's ACES system required some upgrades for the ICIS-Air data flow, and DEQ's node also required an upgrade. With DEQ's approval the end date of the contract was extended to allow for these upgrades and the additional testing required.
Was project/contract completed within or under the original budget / cost proposal, and if not, why not?	Yes

Reference #:	5 - New York Department of Environmental Conservation		
Company Name:	Windsor Solutions		
Identify role company will have for this RFP project (Check appropriate role below):			
X	***VENDOR***		***SUBCONTRACTOR***
Project Name:	Department Application Review and Tracking (DART) Replacement Project Assessment and Planning		
Primary Contact Information			
Name:	Chris O'Connor		
Street Address:	625 Broadway		
City, State, Zip:	Albany NY 12233		
Phone, including area code:	518-402-8258		
Facsimile, including area code:			

Email address:	Christopher.Oconnor@its.ny.gov
Alternate Contact Information	
Name:	
Street Address:	
City, State, Zip:	
Phone, including area code:	
Facsimile, including area code:	
Email address:	
Project Information	
Brief description of the project/contract and description of services performed:	DART is NY DEC's permit tracking system, developed in the 1990s. As such, it is outdated and DEC wishes to update the technology and add functionality. Windsor conducted an assessment of the high level business and technical requirements for a new system that will both support the business functions met by the existing DART functionality and go beyond this to meet today's business needs for application and permit tracking. This included understanding how the various DEC programs that use DART work with the system, which permits are involved, which program systems interact with DART, and what solutions these programs may use as a substitute or augmentation to DART.
Original Project/Contract Start Date:	April 2015
Original Project/Contract End Date:	October 2015
Original Project/Contract Value:	$174,000
Final Project/Contract Date:	October 2015
Was project/contract completed in time originally allotted, and if not, why not?	Yes
Was project/contract completed within or under the original budget / cost proposal, and if not, why not?	Yes

Reference #:	6 - Wyoming Department of Environmental Quality		
Company Name:	Windsor Solutions		
Identify role company will have for this RFP project (Check appropriate role below):			
X	***VENDOR***		***SUBCONTRACTOR***
Project Name:	Solid and Hazardous Waste Division Data Management System		

Primary Contact Information	
Name:	Steve Girt
Street Address:	122 West 25th Street
City, State, Zip:	Cheyenne WY 82002
Phone, including area code:	307-777-7163
Facsimile, including area code:	
Email address:	sgirt@wyo.gov
Alternate Contact Information	
Name:	
Street Address:	
City, State, Zip:	
Phone, including area code:	
Facsimile, including area code:	
Email address:	
Project Information	
Brief description of the project/contract and description of services performed:	Systems assessment, requirements analysis, design, development and implementation of Wyoming DEQ's solid and hazardous waste information management system.
Original Project/Contract Start Date:	July 2013 (assessment phase)
Original Project/Contract End Date:	December 2016 (System Development)
Original Project/Contract Value:	$600,000 (assessment, requirements, development)
Final Project/Contract Date:	December 31, 2016
Was project/contract completed in time originally allotted, and if not, why not?	Yes
Was project/contract completed within or under the original budget / cost proposal, and if not, why not?	Yes

Reference #:	7 - Northwest Indian Fisheries Commission		
Company Name:	Windsor Solutions		
Identify role company will have for this RFP project (Check appropriate role below):			
X	***VENDOR***		***SUBCONTRACTOR***
Project Name:	WQX data flow and GIS spatial viewer enhancements		
Primary Contact Information			
Name:	Bruce Jones		
Street Address:	6730 Martin Way, E.		
City, State, Zip:	Olympia WA 98516		
Phone, including area code:	360-528-4369		
Facsimile, including area code:			
Email address:	bjones@nwifc.org		
Alternate Contact Information			
Name:			
Street Address:			
City, State, Zip:			
Phone, including area code:			
Facsimile, including area code:			
Email address:			
Project Information			
Brief description of the project/contract and description of services performed:	WQX data management system enhancements		
Original Project/Contract Start Date:	September 2014		
Original Project/Contract End Date:	September 2016		
Original Project/Contract Value:	$159,000		
Final Project/Contract Date:	September 2016		
Was project/contract completed in time originally allotted, and if not, why not?	Yes		
Was project/contract completed within or under the original budget / cost proposal, and if not, why not?	Yes		

6.3.4 Vendors must also submit ***Attachment F, Reference Questionnaire*** to the business references that are identified in ***Section 6.3.3***.

Confirmed. Reference questionnaires were submitted to clients.

6.3.5 The company identified as the business references must submit the Reference Questionnaire directly to the Purchasing Division.

Confirmed. Reference questionnaires were submitted to the Purchasing Division by client references.

6.3.6 It is the vendor's responsibility to ensure that completed forms are received by the Purchasing Division on or before the deadline as specified in ***Section 10, RFP Timeline*** for inclusion in the evaluation process. Reference Questionnaires not received, or not complete, may adversely affect the vendor's score in the evaluation process.

Confirmed. Reference questionnaires were submitted to the Purchasing Division by client references.

6.3.7 The State reserves the right to contact and verify any and all references listed regarding the quality and degree of satisfaction for such performance.

Windsor understands and agrees to this requirement.

6.4 VENDOR STAFF SKILLS AND EXPERIENCE REQUIRED

The vendor shall provide qualified personnel to perform the work necessary to accomplish the tasks defined in the Scope of Work. The State must approve all awarded vendor resources. The State reserves the right to require the removal of any member of the awarded vendor's staff from the project.

6.4.1 Project Manager Qualifications

The Project Manager assigned by the awarded vendor to the engagement must have:

6.4.1.1 A minimum of four (4) years of project management experience, within the last ten (10) years, in government or the private sector;

6.4.1.2 A minimum of three (3) years of experience, within the last ten (10) years, managing systems architecture and development projects;

6.4.1.3 A minimum of two (2) years of experience with systems analysis and design;

6.4.1.4 A minimum of two (2) years of experience with systems development and implementation;

6.4.1.5 Completed at least one (1) project within the past three (3) years that involved designing business processes and procedures and developing new systems to support the new business processes; and

6.4.1.6 Completed at least one (1) project within the past three (3) years that involved communication and coordination of activities with external stakeholders.

6.4.2 Technical Lead Qualifications

The technical lead assigned by the awarded vendor must have:

6.4.2.1 A minimum of four (4) years of experience in systems development, design and programming of automated systems;

6.4.2.2 A minimum of four (4) years of experience developing systems using a relational database;

6.4.2.3 A minimum of two (2) years of experience developing Internet applications;

6.4.2.4 A minimum of two (2) years of experience managing systems architecture and systems development projects; and

6.4.2.5 Completed at least (1) project within the past three (3) years that involved conducting a pilot implementation and determining the readiness of the system production.

6.4.3 Implementation Lead Qualifications

The implementation lead assigned by the awarded vendor must have:

6.4.3.1 A minimum of three (3) years of experience managing the implementation of new business processes and procedures and new automated systems to support the new business processes;

6.4.3.2 A minimum of two (2) years of experience managing the implementation of Internet applications;

6.4.3.3 Completed at least one (1) project within the past three (3) years that involved the procurement, receipt and make ready of computer equipment and software; and

6.4.3.4 Completed at least one (1) project within the past three (3) years that involved a phased implementation where systems activities were coordinated between the old and new system environments.

6.4.4 Individual Team Member Qualifications

Each member of the awarded vendor's project team must meet at least one (1) of the qualifications below. In addition, the aggregation of the individual qualifications of the team members must cumulatively meet all of the following requirements. These requirements are:

6.4.4.1 Two (2) years of experience within the last five (5) years analyzing and modeling business processes;

6.4.4.2 Two (2) years of experience within the last five (5) years designing online interfaces using the tools proposed for this project;

6.4.4.3 Three (3) years of experience within the last five (5) years developing systems using the relational database proposed for this project;

6.4.4.4 Three (3) years of experience within the last five (5) years developing system to system interfaces;

6.4.4.5 Three (3) years of experience within the last five years developing secure Internet applications using the tools proposed for this project; and

6.4.4.6 Completed at least one (1) project within the past three (3) years that involved development of course outlines and materials and organizing and conducting classes to support the implementation of new business processes and systems.

Windsor's staff resumes are presented in the next tab section as required by the RFP. Windsor's proposed key staff are uniquely qualified to carry out the duties to be required by this contract.

Tab IX – Attachment I – Proposed Staff Resumes

Vendors must include all proposed staff resumes per ***Section 6.5, Vendor Staff Resumes*** in this section. This section should also include any subcontractor proposed staff resumes, if applicable.

6.5 VENDOR STAFF RESUMES

A resume must be completed for each proposed individual on the State format provided in ***Attachment I, Proposed Staff Resume,*** including identification of key personnel per ***Section 14.3.19, Key Personnel*.**

Windsor has a deep and broad cross-section of staff who may be available to work on projects under this contract. Most of our staff have relevant and recent experience with NEIEN projects. Windsor can provide a full team of experts for any task order issued under this contract. In the interest of brevity, we have provided resumes only for our Key Personnel. Proposed Key Personnel for this project include the following individuals:

- ***Project Manager: Kevin Lyons***
- ***Technical Architect: Ted Morris***
- ***Lead Analyst: Bill Rensmith***
- ***Lead Analyst: Chris Tyler***
- ***Senior Developer: Jaime McFarland***

Resumes for these key staff are presented below. Depending on the nature of a given task order, additional staff may be utilized. Windsor employs over 50 professional IT consultants in a wide variety of roles and we have the capacity to staff any project that might be performed under this contract. Resumes for additional personnel can be provided on request.

PROPOSED STAFF RESUME

A resume must be completed for all proposed contractor staff and proposed subcontractor staff.

COMPANY NAME:	Windsor Solutions		
☒ **Contractor**		☐ **Subcontractor**	
Name:	**Kevin Lyons, PMP, CSM**	☒ **Key Personnel**	
Classification:	Project Manager	**# of Years in Classification:**	15
Brief Summary of Experience:	Kevin is certified as a Project Management Professional (PMP) and Agile Certified Scrum Master (CSM) by the Project Management Institute with over 15 years of professional experience as a developer, analyst and project manager. He has managed numerous projects ranging from a few thousand to several million dollars in size and has extensive experience with NEIEN projects, including several with NDEP. Kevin brings extensive information systems analysis, design, and development experience in a variety of technologies and industries. Kevin also brings exceptional facilitation, communication, organizational and management skills. Kevin has been involved in many full life-cycle projects, where he was responsible for all aspect of the project. His leadership and versatility have contributed to the success of the projects. Since 2001, Kevin has worked exclusively with local, state and federal environmental agencies as well as tribes to develop custom software solutions. Kevin has many years of experience with systems architecture and development, systems analysis and design, and implementation projects ranging from small Exchange Network plugins to multi-year, multimillion dollar systems integration projects.		
# of Years with Firm:	15		

RELEVANT PROFESSIONAL EXPERIENCE	
Required Information:	
MMYYYY to MMYYYY:	***2015-2016***
Vendor Name:	***Windsor Solutions***
Client Name:	***Nevada Department of Environmental Protection***
Client Contact Name:	***Kevin Weiss***
Client Address, Phone Number, Email:	***Nevada Department of Environmental Protection*** ***901 S. Stewart St #4001*** ***Carson City, NV 89701*** ***775-687-9324*** ***kweiss@ndep.nv.gov***
Role in Project:	***Project Manager***
Details and Duration of Project:	***Water Quality Data Management and WQX Flow: Kevin performed the project manager role on this project where the team was responsible for enhancing and implementing the Surface Water Management System to meet NDEP's needs, performing a data migration from legacy databases and supporting a new data flow to WQX.*** ***Kevin's responsibilities on this project included analysis and design, project planning, management of project activities and ensuring a successful project result.***
Software/hardware used in engagement:	***OpenNode2; WQX plugin; .NET, SQL Server***

Required Information:	
MMYYYY to MMYYYY:	***2015-2016***
Vendor Name:	***Windsor Solutions***
Client Name:	***Nevada Department of Environmental Protection***
Client Contact Name:	***Kevin Weiss***
Client Address, Phone Number, Email:	***Nevada Department of Environmental Protection*** ***901 S. Stewart St #4001*** ***Carson City, NV 89701*** ***775-687-9324*** ***kweiss@ndep.nv.gov***
Role in Project:	***Project Manager***
Details and Duration of Project:	***NetDMR Custodian: Kevin held the project manager role on this project where the team was responsible for stabilizing and enhancing the State of Nevada's NetDMR tool, including the ICIS-NPDES flows that supported this tool.*** ***Kevin's responsibilities on this project included project planning, management of project activities and ensuring a successful project result.***
Software/hardware used in engagement:	***OpenNode2; ICIS-NPDES plugin; .NET, SQL Server***

Required Information:	
MMYYYY to MMYYYY:	***2009-2015***
Vendor Name:	***Windsor Solutions***
Client Name:	***Northwest Indian Fisheries Commission***
Client Contact Name:	***Bruce Jones***
Client Address, Phone Number, Email:	***Northwest Indian Fisheries Commission*** ***6730 Martin Way, E.*** ***Olympia WA 98516*** ***360-528-4369*** ***bjones@nwifc.org***
Role in Project:	***Project Manager***
Details and Duration of Project:	***Water Quality Data Management, Exchange Network Node v2, Nearshore Data Exchange, and Juvenile Migrant Salmon data exchange: Kevin held the project manager role on this project where the team was responsible for designing, developing, testing and implementing the WQX data flow, a new Juvenile Migrant Exchange (JMX) flow, and a new Nearshore Data flow on a tribal "SuperNode" which allows member Tribes, the Northwest Indian Fisheries Commission, the Washington Department of Fish and Wildlife, and other local organizations to collect, exchange and integrate juvenile migrant salmon, nearshore habitat, and WQX information using the OpenNode2 software.*** ***This project involved extensive communication and coordination with various stakeholders, internal and external, including over a dozen member tribes, two state environmental agencies, and the Puget Sound Partnership.*** ***Kevin's responsibilities on this project included project planning, management of project activities and ensuring a successful project result.***
Software/hardware used in engagement:	***OpenNode2; WQX plugin; JMX plugin; nearshore plugin; GIS data viewer; .NET SQL server***

EDUCATION	
Institution Name:	Oregon State University
City:	Corvallis
State:	Oregon
Degree/Achievement:	B.Sc. Management Information Systems, minor Industrial/Manufacturing Engineering

Certifications:	Project Management Professional (PMP); Certified ScrumMaster (CSM)	
HARDWARE/SOFTWARE SUMMARY (Be Specific)		
Description		***# of Year's Experience***
Environments:	Windows (all versions)	20+
Hardware:		
Software:		
Tools:	MS Office MS Project	20 15
Databases:	SQL Server Oracle MS Access Exchange Network nodes, OpenNode2, data plugins	20 10 10 13
REFERENCES		
Minimum of three (3) required, including name, title, organization, phone number, fax number and email address	***Please see client contacts above***	

PROPOSED STAFF RESUME

A resume must be completed for all proposed contractor staff and proposed subcontractor staff.

COMPANY NAME:	Windsor Solutions		
■ **Contractor**		☐ **Subcontractor**	
Name:	Ted Morris	■ **Key Personnel**	
Classification:	Technical Lead	**# of Years in Classification:**	15
Brief Summary of Experience:	Senior Technical Architect with 30 years of experience as a software engineer and architect. Ted has extensive experience developing internet applications for a wide variety of state environmental agency clients, and has worked with most major relational databases. During the past several years, Ted has acted as the principal engineer and architect of OpenNode2, which provides simultaneous support for the latest EPA Exchange Node Specifications, including v1.1, v2.0, and v2.1. Ted has also been instrumental in providing guidance to EPA and ECOS regarding enhancements to the Exchange Network Node Specifications.		
# of Years with Firm:	8		

RELEVANT PROFESSIONAL EXPERIENCE	
Required Information:	
MMYYYY to MMYYYY:	***September 2009 to present***
Vendor Name:	***Windsor Solutions***
Client Name:	***Environmental Council of States***
Client Contact Name:	***Greg McNelly***
Client Address, Phone Number, Email:	***The Environmental Council of the States*** ***50 F Street NW; Suite 350*** ***Washington, DC 20001*** ***202-266-4930*** ***gmcnelly@ecos.org***
Role in Project:	***Technical Architect***
Details and Duration of Project:	***General Support Contract for Exchange Network. Ted is the principal technical architect for OpenNode2 and is responsible for all engineering and architecture for the node platform and all upgrades. He has also been involved in implementing the node and various data flow plugins in over 30 different agencies.***
Software/hardware used in engagement:	***OpenNode2, both .NET and Java versions; various databases including SQL Server and Oracle; data viewers and GIS integration***

Required Information:	
MMYYYY to MMYYYY:	***2009 to 2015***
Vendor Name:	***Windsor Solutions***
Client Name:	***Northwest Indian Fisheries Commission***
Client Contact Name:	***Bruce Jones***
Client Address, Phone Number, Email:	***Northwest Indian Fisheries Commission*** ***6730 Martin Way, E.*** ***Olympia WA 98516*** ***360-528-4369*** ***bjones@nwifc.org***
Role in Project:	***Technical Architect***
Details and Duration of Project:	***OpenNode2 "SuperNode" pilot project: Ted was technical architect responsible for designing and implementing a multi-tribe "SuperNode" allowing member tribes to share data via the Exchange Network through a single central instance. The pilot project involved OpenNode2 deployment, WQX Exchange Network data flow at a number of tribal members, and WQX GIS Spatial Viewer development. Later phases involved innovative new data flows including Juvenile Migrant Salmon data and Nearshore Habitat data. The SuperNode concept was proven and later deployed at another tribal consortium in the southeast United States.***
Software/hardware used in engagement:	***OpenNode2; GIS; ASP.NET; WQX, JMX, and Nearshore plugins***

Required Information:	
MMYYYY to MMYYYY:	***2012-2013***
Vendor Name:	***Windsor Solutions***
Client Name:	***Wyoming Department of Environmental Quality***
Client Contact Name:	***Steve Girt***
Client Address, Phone Number, Email:	***Wyoming DEQ*** ***122 West 25th Street*** ***Cheyenne WY 82002*** ***307-777-7163*** ***sgirt@wyo.gov***
Role in Project:	***Technical Architect***
Details and Duration of Project:	***Surface Water Monitoring System: Ted architected, developed, tested, and successfully deployed Windsor's SWM 2.0 system to the Wyoming DEQ development and production environments. The SWM web application, web services, and database backend allow complete editing, viewing, querying and data export and migration capabilities for WY DEQ's SWM datasets. The application solutions also interoperate with OpenNode2 and the Exchange Network to provide submissions of WQX datasets to EPA.***
Software/hardware used in engagement:	***OpenNode2; WQX plugin; .NET SQL Server***

EDUCATION	
Institution Name:	Stanford University
City:	Stanford
State:	California
Degree/Achievement:	B.S. Mechanical Engineering; M.S. Mechanical Engineering
Certifications:	

HARDWARE/SOFTWARE SUMMARY (Be Specific)		
	Description	***# of Year's Experience***
Environments:	Windows (through v10), Windows Server (through v2016), Linux, Mac OS	30
Hardware:		
Software:	All Microsoft software; Java OpenNode2, data plugins	30 8
Tools:	Visual Studio (through v2015), C++, C#, Javascript, Java, VB.NET, etc.	30
Databases:	Sql Server (through v2016), MySQL (through v5.7), Oracle (through v12c)	15

REFERENCES	
Minimum of three (3) required, including name, title, organization, phone number, fax number and email address	***Please see client contacts above***

PROPOSED STAFF RESUME

A resume must be completed for all proposed contractor staff and proposed subcontractor staff.

COMPANY NAME:	Windsor Solutions		
☒ **Contractor**		☐ **Subcontractor**	
Name:	Bill Rensmith	☒ **Key Personnel**	
Classification:	Lead Analyst (Implementation Lead)	**# of Years in Classification:**	15
Brief Summary of Experience:	Bill is one of the nation's leading experts on Exchange Network technology and data exchanges. He has designed and implemented multiple data flows. He has been a key participant in the Exchange Network governance Network Technology Group (NTG) as a technical advisor. He was the key author and a significant contributor to the overall standards currently in practice with the Exchange Network including the Exchange Network XML Design Rules and Conventions (DRCs) and the Exchange Design Rules and Conventions (EDRCs). In addition to his involvement with the Exchange Network governance, Bill has a long list of experience developing and implementing nodes and flows for Exchange Network partners including Minnesota PCA, Colorado DPH, Arkansas DEQ, Illinois EPA, and the Pollution Prevention Resource Center (PPRC) in Seattle. Bill is also experienced in leading requirements and design sessions, developing and running training sessions and workshops, and writing training plans. Bill was a Senior Technical Trainer at a previous employer.		
# of Years with Firm:	11		

RELEVANT PROFESSIONAL EXPERIENCE	
Required Information:	
MMYYYY to Present:	***September 2009 to present***
Vendor Name:	***Windsor Solutions***
Client Name:	***Environmental Council of States***
Client Contact Name:	***Greg McNelly***
Client Address, Phone Number, Email:	***The Environmental Council of the States*** ***50 F Street NW; Suite 350*** ***Washington, DC 20001*** ***202-266-4930*** ***gmcnelly@ecos.org***
Role in Project:	***Lead Analyst, Project Manager***
Details and Duration of Project:	***General Support Contract for Exchange Network. Windsor developed OpenNode2, the predominant software used by states, tribes, and private industry on the Exchange Network. OpenNode2 is owned and maintained by ECOS through a support contract with Windsor. Since the beginning of a support agreement in 2009, Bill has served as the project manager to maintain the OpenNode2 software, develop and maintain data flow modules (plugins), and to provide ongoing support to implementers across the country, including node and plugin training documentation and materials for implementers. In this capacity, Bill has become intimately familiar with the node software, specific implementation challenges, and interoperability issues that may arise.***
Software/hardware used in engagement:	***OpenNode2 and associated Plugins***

Required Information:	
MMYYYY to MMYYYY:	***2013 to present***
Vendor Name:	***Windsor Solutions***
Client Name:	***Michigan Department of Environmental Quality***
Client Contact Name:	***Mike Masterson***
Client Address, Phone Number, Email:	***525 West Allegan Street Lansing, MI 48909-7973 517-243-4045 MASTERSONM@michigan.gov***
Role in Project:	***Lead Analyst***
Details and Duration of Project:	***Bill is a business analyst and team lead responsible for developing key functional components for the MiWaters system which consolidates and replaces over 25 existing systems used by WRD, bringing consistency to permitting and compliance processes, and significantly enhancing WRD's capabilities through advanced technologies (e.g., GIS), enhanced public access to information, and improved data integrity.*** • ***Led detail requirement analysis and workflow design for multiple functional areas including Application Processing, Permitting, Permit Limits, Schedules of Compliance, Discharge Monitoring Reporting, and ICIS/NPDES reporting.*** • ***Worked closely with DEQ to develop user stories and design functionality for the above functional areas, including data modeling, user interface design, and business rule definition.*** • ***Designed MiWaters approach for workflow and task processing.*** • ***Using Agile/Scrum approach, led functional development team to successfully develop, test and deliver functionality for nine pre-production application releases.***
Software/hardware used in engagement:	***.NET SQL Server, Windsor software (OpenNode2, nForm, nSpect, nSite)***

Required Information:	
MMYYYY to MMYYYY:	***2011-2013***
Vendor Name:	***Windsor Solutions***
Client Name:	***Arkansas Department of Environmental Quality***
Client Contact Name:	***Patrick Stair***
Client Address, Phone Number, Email:	***Arkansas Dept. of Environmental Quality*** ***5301 Northshore Drive*** ***North Little Rock, AR 72118-5317*** ***501-682-0673*** ***patrick.stair@adeq.state.ar.us***
Role in Project:	***Lead Analyst***
Details and Duration of Project:	***Water Quality Analysis Reporter (WQAR); Bill served as the lead analyst for a project to gather requirements and develop a design for the Arkansas DEQ Water Quality Analysis Reporter (WQAR) application. WQAR is used to calculate whether surface waters meet water quality standards and designated uses. Bill met with subject matter experts for a three-day analysis workshop. The workshop involved rapid interface prototyping and data modeling to quickly and efficiently develop a design framework. Bill then synthesized and documented the requirements from the meeting and developed a comprehensive system design document. Bill then led the effort to develop, test and implement the WQAR application. WQAR was implemented in July, 2013.***

EDUCATION	
Institution Name:	Michigan State University, Eli Broad College of Business
City:	East Lansing
State:	Michigan
Degree/Achievement:	B.A. Business Administration
Certifications:	

HARDWARE/SOFTWARE SUMMARY (Be Specific)		
	Description	***# of Year's Experience***
Environments:	Windows (all versions)	16
Hardware:		
Software:	Visual Studio SQL Server Management Studio OpenNode2, data plugins	15 15 11

Tools:	Altova XML Spy Axure Prototyping Tool Microsoft Project Microsoft Visio	12 6 15 16
Databases:	SQL Server Oracle	12 15

REFERENCES	
Minimum of three (3) required, including name, title, organization, phone number, fax number and email address	***Please see client contacts above***

PROPOSED STAFF RESUME

A resume must be completed for all proposed contractor staff and proposed subcontractor staff.

COMPANY NAME:	Windsor Solutions		
☒ **Contractor**		☐ **Subcontractor**	
Name:	Chris Tyler	☒ **Key Personnel**	
Classification:	Analyst (Implementation Lead)	**# of Years in Classification:**	16
Brief Summary of Experience:	Chris is a senior analyst at Windsor with more than 15 years of experience in data system design, requirements management and business analysis. Projects at Windsor have focused on the implementation of Exchange Network data flows and the design of permitting applications (public facing and internal) for several states. Chris works with customers to gain a thorough understanding of business needs in order guide requirements and system development. Chris' extensive prior work with databases, software development and systems integration helps him guide the technical details of project design and implementation.		
# of Years with Firm:	5		

RELEVANT PROFESSIONAL EXPERIENCE	
Required Information:	
MMYYYY to Present:	***2013-Present***
Vendor Name:	***Windsor Solutions***
Client Name:	***Nevada Department of Environmental Protection***
Client Contact Name:	***Kevin Weiss***
Client Address, Phone Number, Email:	***Nevada Department of Environmental Protection*** ***901 S. Stewart St #4001*** ***Carson City, NV 89701*** ***775-687-9324*** ***kweiss@ndep.nv.gov***
Role in Project:	***Lead Systems Analyst***
Details and Duration of Project:	***Chris is the lead Systems Analyst on a project to implement a web based application to support the inquiry and display of water quality data. The site will support public inquiry of station monitoring data selectable through a map interface.***
Software/hardware used in engagement:	***OpenNode2; .NET, SQL Server***

Required Information:	
MMYYYY to MMYYYY:	***2012-2013***
Vendor Name:	***Windsor Solutions***
Client Name:	***Hawaii Department of Health***
Client Contact Name:	***Andy Matsumoto***
Client Address, Phone Number, Email:	***Hawaii DOH*** ***919 Ala Moana Blvd.*** ***Honolulu, HI 96814*** ***808-586-4641*** ***andy.matsumoto@doh.hawaii.gov***
Role in Project:	***Lead Analyst***
Details and Duration of Project:	***ICIS-NPDES Data Exchange; Chris was the Systems Analyst on a team to implement the ICIS-NPDES flow for the state of Hawaii Department of Health. The project included flowing data for permits, inspections, enforcement actions, violations, and spill reports from source data in their local permitting database. The project involved implementation the ICIS-NPDES plugin and necessary ETL scripts to translate data.***
Software/hardware used in engagement:	***OpenNode2; ICIS-NPDES plugin; .NET, SQL Server***

Required Information:	
MMYYYY to MMYYYY:	***2011-2012***
Vendor Name:	***Windsor Solutions***
Client Name:	***Nevada Department of Environmental Quality***
Client Contact Name:	***Kevin Weiss***
Client Address, Phone Number, Email:	***Nevada Department of Environmental Protection*** ***901 S. Stewart St #4001*** ***Carson City, NV 89701*** ***775-687-9324*** ***kweiss@ndep.nv.gov***
Role in Project:	***SystemsAnalyst***
Details and Duration of Project:	***Permit Data Flow and NetDMR Customization: Chris was a Systems Analyst on a project to flow permit information from Nevada's local information system into ICIS (through the exchange network) and into a customized NetDMR implementation. The project eliminates the need for manual information entry of permits and allows facilities to fill out DMRs for both state and EPA permits using the NetDMR application. The project included implementation of ICIS-NPDES and ICIS-NetDMR flows in the exchange network.***
Software/hardware used in engagement:	***OpenNode2; ICIS-NPDES and ICIS-NetDMR plugins; .NET, SQL Server***

EDUCATION	
Institution Name:	Harvey Mudd College
City:	Claremont
State:	California
Degree/Achievement:	B.S. Engineering Management, M.S. Engineering Management
Certifications:	

HARDWARE/SOFTWARE SUMMARY (Be Specific)		
	Description	***# of Year's Experience***
Environments:	Windows (all versions), Linux	16
Hardware:	N/A	
Software:	Word, Excel, VBA, Visio, OpenNode2, data plugins	16

Tools:	SQL Server Management Studio, SqlDeveloper, Putty, SSH, Bash, Command line, Talend ETL, Remote Desktop	12
Databases:	Oracle, SQL Server, MySQL, MS Access	12

REFERENCES	
Minimum of three (3) required, including name, title, organization, phone number, fax number and email address	***See client contacts above***

PROPOSED STAFF RESUME

A resume must be completed for all proposed contractor staff and proposed subcontractor staff.

COMPANY NAME:	Windsor Solutions		
■ **Contractor**		☐ **Subcontractor**	
Name:	Jaime McFarland	■ **Key Personnel**	
Classification:	Developer	**# of Years in Classification:**	30
Brief Summary of Experience:	Jaime has 30 years of software design and development experience including both traditional and object-based methodologies. Jaime has a variety of technical skills and is exceptionally well-qualified in the use of Microsoft tools, including the .NET development platform and SQL Server.		
# of Years with Firm:	11		

RELEVANT PROFESSIONAL EXPERIENCE

Required Information:	
MMYYYY MMYYY:	***2013 to present***
Vendor Name:	***Windsor Solutions***
Client Name:	***Michigan Department of Environmental Quality***
Client Contact Name:	***Mike Masterson***
Client Address, Phone Number, Email:	***525 West Allegan Street Lansing, MI 48909-7973 517-243-4045 MASTERSONM@michigan.gov***
Role in Project:	***Lead Developer***
Details and Duration of Project:	***MiWaters Application: MiWaters includes complete integration with Windsor's nForm, nSpect, and nSite product suites. The solution includes both public-facing and internal web sites, consolidates and replaces over 25 existing systems used by WRD, brings consistency WRD's to permitting and compliance processes and workflows, and significantly enhances WRD's capabilities through the use of the latest web and service development frameworks and advanced technologies (e.g., GIS).*** ***Jaime worked on the document templating portion of the MiWaters application. This allowed admin users to create templates with mail merge replacement of key areas of documents.***
Software/hardware used in engagement:	***VS 2013, SQL Server, C#, Angular, and MVC.***

Required Information:	
MMYYYY MMYYY:	***2010-2012***
Vendor Name:	***Windsor Solutions***
Client Name:	***Hawaii Department of Health***
Client Contact Name:	***Andy Matsumoto***
Client Address, Phone Number, Email:	***Hawaii DOH*** ***919 Ala Moana Blvd.*** ***Honolulu, HI 96814*** ***808-586-4641*** ***andy.matsumoto@doh.hawaii.gov***
Role in Project:	***Lead Developer***
Details and Duration of Project:	***ePermitting Project: This application is a web based electronic permitting system that can capture, organize and analyze data to streamline the State's permitting process. This application was the basis for an ePermitting product that is currently being implemented by Windsor for other clients. Jaime assumed the lead development role as the project went through its implementation through testing phases with HI DOH staff.***
Software/hardware used in engagement:	***There were several technologies used in development of this project such as Coded VS 2010, SQL 2008, Spring.NET, MVC, IIS 7.0, C#, JavaScript/jQuery, AJAX.***

Required Information:	
MMYYYY MMYYY:	***2011-2012***
Vendor Name:	***Windsor Solutions***
Client Name:	***Wyoming Department of Environmental Quality***
Client Contact Name:	***Steve Girt***
Client Address, Phone Number, Email:	***Wyoming DEQ*** ***122 West 25th Street*** ***Cheyenne WY 82002*** ***307-777-7163*** ***sgirt@wyo.gov***
Role in Project:	***Lead Developer***
Details and Duration of Project:	***Surface Water Management System: With the Surface Water Monitoring (SWM) 2.0 project, WDEQ sought to resolve some functional limitations and data migration issues with an existing system and improve the quality of surface water monitoring data, increasing the efficiency of data entry, and improving data access and analysis capabilities.*** ***Jaime was senior developer on this application, which is a web based system that was built using VS 2010, SQL 2008, IIS 7.0, C#, MS AJAX, and Telerik controls.***
Software/hardware used in engagement:	***VS 2010, SQL 2008, IIS 7.0, C#, MS AJAX, and Telerik***

EDUCATION	
Institution Name:	University of Oregon
City:	Eugene
State:	Oregon
Degree/Achievement:	B.S. Computer Science/Fine and Applied Arts
Certifications:	MCAD (Microsoft Certified Application Developer, .NET); MCSD (Microsoft Certified Solutions Developer)

HARDWARE/SOFTWARE SUMMARY (Be Specific)		
	Description	***# of Year's Experience***
Environments:	Windows (all versions)	31
Hardware:		
Software:	OpenNode2; Exchange Network plugins	11

Tools:	Visual Studio (all versions) IIS (all versions)	19 21
Databases:	SQL Server	11
REFERENCES		
Minimum of three (3) required, including name, title, organization, phone number, fax number and email address		

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Tab X – Preliminary Project Plan

Vendors must include the preliminary project plan in this section.

Windsor believes the intent of this section is to provide a project plan for the tasks outlined in Section 5.5 of the RFP; therefore, we have provided our approach to a project incorporating the following elements, from Section 5.5:

5.5 FLOW COMPONENTS

5.5.1 Objective

The objective of this task is to review the NDEP infrastructure and data associated with the environmental data. Based on this review, develop a node implementation plan.

5.5.2 Activities

5.5.2.1 Design flow components

B. Develop a node implementation plan

5.5.2.2 Develop flow components

C. Develop, install and configure software necessary to perform the required web services.

D. Map the middleware to the production data.

5.5.2.3 Test flow components

B. Test the system functionality and troubleshoot any problems.

5.5.2.4 Implement flow components

C. Prepare flow configuration documentation to provide technical details that describe the data methodology and procedures.

D. Provide on-site training to Division IT staff to enable maintenance and troubleshooting of the Node.

5.5.3 Deliverables

5.5 FLOW COMPONENTS			
DELIVERABLE NUMBER	**DESCRIPTION OF DELIVERABLE**	**ACTIVITY**	**STATE'S ESTIMATED REVIEW TIME (WORKING DAYS)**
5.5.3.1	Develop a node implementation plan	5.5.2.1	20
5.5.3.2	Develop, install and configure software for required web services	5.5.2.2A	60
5.5.3.3	Map middleware to production data	5.5.2.2	20
5.5.3.4	Test system functionality and troubleshoot any problems	5.5.2.3	14
5.5.3.5	Prepare flow configuration documentation to provide technical details	5.5.2.4A	7
5.5.3.6	Provide on-site training	5.5.2.4B	1

Windsor will provide flow component services in line with the task requested. Windsor's approach to providing data flows is consistent with the approach requested.

The task objective is somewhat inconsistent with the described task activities, making it unclear as to how to respond. The objective describes a review and establishment of an implementation plan, while the activities imply the execution of an implementation plan.

Windsor assumes that NDEP therefore wishes to perform the review of the NDEP infrastructure and data associated with the environmental data followed by the establishment of an implementation plan and subsequent execution of the developed plan. The scope of such an implementation plan will be dependent heavily upon the findings of the review.

Furthermore, the extent of the requested review of the NDEP infrastructure and data associated with the environmental data is unclear. The following approach therefore assumes an initial high level review of the NDEP node infrastructure and environmental data included within existing flows. The actual review may extend more broadly or be narrower than that described.

The approach and associated estimates should therefore be treated as a guide since the specifics of the task must be established in further detail in order to firm up the scope and estimates.

Each data flow and source system presents its own complications and requirements. As such, an example data flow is used to provide a guide and illustration in terms of the approach which would typically be followed for satisfying the activities described within section 5.5.2 of this RFP. It should be noted that the complexity of any given data flow implementation can

vary widely. For this example, the ICIS-Air data flow (which is generally considered a somewhat complicated flow) has been selected.

The following provides an example of the approach that would be followed to develop, test and implement a [ICIS-Air] data flow.

Initiate Project

Develop Project Plan

A project plan will be developed that details the project tasks and schedule, including a detailed work breakdown structure. The plan will describe the timing and expected level of effort required from all parties throughout the project.

Deliverable(s)

- ***Project plan document***

Hold Project Kickoff Meeting

A conference call will be held with the project team to review the project plan, proposed schedule, and initial risk assessment. This meeting will also be used to ensure that all project participants understand the goals of the project, the expected outcomes, and their roles and responsibilities.

Deliverable(s)

- ***Project kickoff meeting***

Review Node Infrastructure (5.5.2.1 Design flow components)

Hold Infrastructure Review Meeting

An onsite meeting will be held with NDEP staff to review the existing NDEP infrastructure and data associated with the environmental data. Current Node configuration, versioning and deployment environments will be discussed and catalogued, including the status of all existing data flows and data flow components that are present within those environments.

Deliverable(s)

- ***Infrastructure Review Meeting***

Develop Node Implementation Plan

Based upon information determined within the Infrastructure Review Meeting, Windsor will establish the appropriate path forward to upgrade the node infrastructure accordingly. This will ensure that the appropriate environments are established for development, testing and production for successful future operation of the node within the exchange network. Each of the current flows will be included within the implementation plan to ensure that they are upgraded to the latest versions and are consistent with NDEP goals. Future planned data flows will be included based upon direction of NDEP staff.

Deliverable(s)

- ***Node Implementation Plan***

NOTE: The remainder of this approach focuses specifically on a single data flow. This approach would be reused to address other flows. The actual activities performed may vary by data flow.

Design ICIS-Air Data Flow (5.5.2.1 Design flow components)

Hold Design Meeting

Windsor will facilitate meetings with NDEP staff to confirm the data submission and verification work flow process for ICIS-Air.

The current expectation is that Windsor will develop Oracle database procedures that will extract the required data from the ARIS database and will migrate this data into the plugin staging database.

This workflow will be confirmed and the appropriate technical architecture will be agreed.

Deliverable(s)

- ***Data flow design meeting***

Map Data Flow

Windsor will facilitate additional meetings with NDEP staff to map the data managed in the ARIS database to the ICIS-Air Data Exchange Template (DET) and XML schema for each of the data submission types that will be submitted.

This data mapping exercise will need to consider each of the data extraction steps that will be involved in the process, and the format of the data that will be returned by the extract routines.

This mapping will be used to guide the development of the data extraction procedures. It will also direct data cleaning tasks to be conducted by NDEP staff that may be needed to meet ICIS business rules.

Deliverable(s)

- ***Data flow mapping***

Develop Data Flow Design Documents

Windsor will document the intended ICIS-Air data flow design, and will finalize a detailed mapping specification that will be used to develop the data extraction logic. The design documentation will also describe any data cleaning activities that will be required within the NDEP system.

Deliverable(s)

- ***Draft data flow design document***

Review Design Documents

The data flow design documents will be reviewed by NDEP and questions and issues will be resolved.

Deliverable(s)

- ***Final data flow design document***

Hold Design Project Checkpoint Meeting

Windsor will meet with the NDEP project team to discuss any major roadblocks or issues that need to be addressed. This meeting will also be used to review the project scope and plan subsequent development, testing and implementation activities.

There is a chance that ICIS-Air data flow design activities will reveal issues in the source data in the NDEP system that cannot be resolved by data cleaning activities alone. This meeting will discuss any

changes that may therefore be required to the scope of data families to be submitted through the data flow.

The project schedule will be revised as necessary to accommodate data cleaning and any other changes that may be required.

Deliverable(s)

- ***Design checkpoint meeting***

Develop ICIS-Air Data Flow (5.5.2.2 Develop flow components)

Develop Data Load Procedures

Windsor will develop database procedures to extract, transform and load data from the ARIS database to populate the OpenNode2 ICIS-Air data flow staging tables.

Deliverable(s)

- ***Data load procedures***

Support Data Cleaning

The Design Document will specify any data cleaning activities that will be required in the ARIS database. Additional data cleaning needs will likely be determined during data flow testing.

NDEP staff will be responsible for conducting data cleaning tasks to update any data contained in the database to be compliant with ICIS-Air business rules. Windsor will assist NDEP staff as required.

Deliverable(s)

- ***Data cleaning support***

System Test ICIS-Air Data Flow (5.5.2.3 Test flow components)

Install Data Flow in Test Environment

The NDEP OpenNode2 test and production instances will be updated to the latest available version if necessary.

The ICIS-Air data flow will be installed and configured in the NDEP OpenNode2 test environment. This will involve installing and configuring the OpenNode2 ICIS- Air plug-in(s) and the corresponding staging table environment.

Deliverable(s)

- ***Data flow installed in test environment***

Test Data Flow

The data flow will be locally tested using the NDEP OpenNode2 and data extracts from the test ARIS environment. Once local testing has been completed, test ICIS-Air submissions will be sent to EPA via CDX for testing and evaluation by the EPA. These testing tasks will be coordinated with EPA to avoid scheduled maintenance activities on the ICIS-Air system.

It is expected that multiple test submissions will be conducted to the ICIS-Air stage environment during this task to iteratively confirm that all data submission types meet ICIS- Air business rules.

Based on the testing results, Windsor will make modifications to the data extraction procedures as needed. NDEP staff will conduct additional data cleaning as needed.

Deliverable(s)

- ***Tested data flow***

Implement ICIS-Air Data Flow (5.5.2.4 Implement flow components)

Install Data Flow in Production Environment

The data flow will be deployed and enabled in the NDEP OpenNode2 production environment. Initial production submissions will be supported.

Windsor will provide a data flow implementation guide document and hold onsite training.

Deliverable(s)

- ***Data flow installed in production environment***
- ***Data flow implementation guide***
- ***Training***

Tab XI – Other Informational Material

Vendors must include any other applicable reference material in this section clearly cross referenced with the proposal.

Public Agency Focus

Windsor has conducted successful projects for dozens of state agencies, in addition to county, tribal, municipal, and regional governmental agencies. Some of our clients include:

Alaska Department of Environmental Conservation	Minnesota Department of Natural Resources
Arizona Department of Environmental Quality	Missouri Department of Natural Resources
Arkansas Department of Environmental Quality	Montana Department of Environmental Quality
California Environmental Protection Agency	Nebraska Department of Environmental Protection
California State Water Resources Control Board	Nevada Department of Environmental Protection
Colorado Department of Public Health and Environment	New Hampshire Department of Environmental Conservation
Connecticut Department of Energy and Environmental Protection	New Mexico Environment Department
Environmental Council of States	New York Department of Environmental Conservation
Georgia Department of Natural Resources	New York Department of Health
Hawaii Department of Health	North Dakota Department of Health
Indiana Department of Environmental Management	Northwest Indian Fisheries Commission
Iowa Department of Natural Resources	Oregon Department of Environmental Quality
Kansas Department of Health and Environment	South Carolina Department of Health and Environmental Control
Massachusetts Department of Environmental Protection	Vermont Department of Environmental Conservation
Michigan Department of Environmental Quality	Washington Department of Ecology
Minnesota Department of Public Safety	Wyoming Department of Environmental Quality

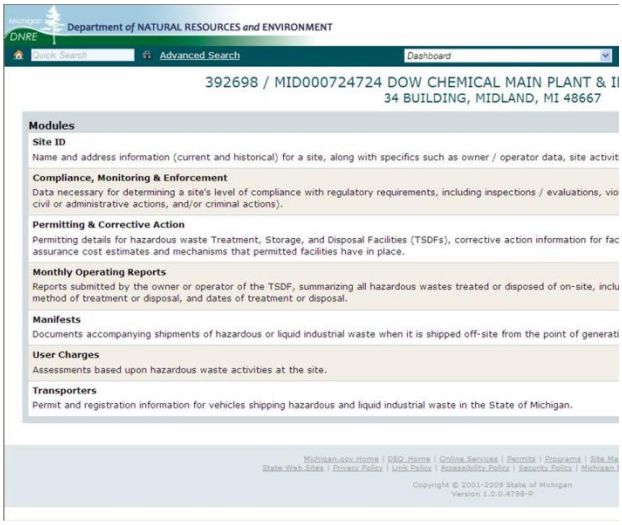
Michigan DEQ Waste Data System, OpenNode2 and RCRA Data Flows

The Michigan Department of Environmental Quality (MDEQ) Resource Management Division (RMD) contracted Windsor to perform a multi-phased project for the development of an integrated cross-program waste management system.

Prior to this project the Division maintained nine separate internal information systems in addition to staff having to hand-key data into EPA's Resource Conservation and Recovery Act Information (RCRAInfo)

system for the management of hazardous waste information. The first version of the MDEQ's Waste Data System (WDS) was delivered by Windsor Solutions for production use in 2001.

In 2009 the MDEQ contracted with Windsor Solutions to redevelop the WDS in current technologies. In the intervening period between initial production release and 2009, both web and database technologies had advanced significantly as to warrant the investment of resources for an application that was so critical to the day to day work processes of the Division.



The current implementation of the WDS is a web based application based on the Microsoft .NET Framework with data being managed and reported upon using the Microsoft's SQL Server platform and its associated services (Reporting Services, Integration Services).

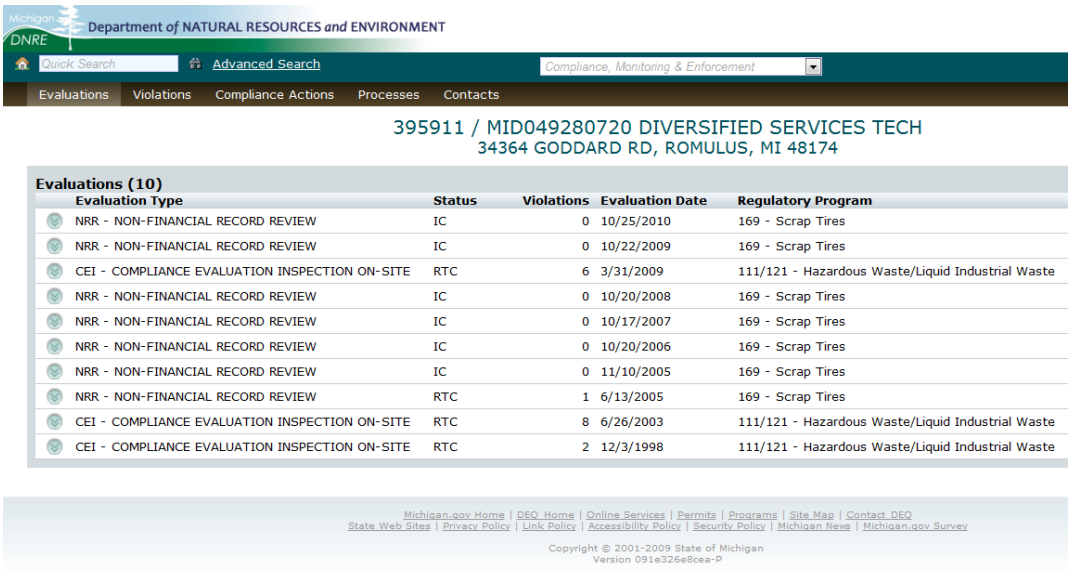
The application is available both internally and publicly (http://www.deq.state.mi.us/wdspi/Home.aspx) with sensitive data being removed from the publicly available version. The division has found that making the data publicly available has resulted in a significant decrease in the number of information requests submitted by the public, freeing up resource-limited staff to address other pressing matters.

Programmatically, WDS manages data for the following areas:

- RCRA Hazardous Waste Generation and Management
  - Hazardous Waste Notification (Site Identification)
  - Hazardous Waste Manifest Management and Tracking
    - 2.7 million hazardous waste shipments managed over 20 years
    - Integrated with User Charges to accurately assess annual hazardous waste fees.
  - Treatment Storage and Disposal Facility (TSDF) Permitting
  - TSDF Financial Assurance
  - TSDF Corrective Action
  - TSDF Monthly Operating Reports
  - Annual Reporting (Biennial Reporting to EPA)
  - User Charges (Fees) with integration to agency-wide financial systems
- Hazardous Waste and Liquid Industrial Waste Transporters
  - Permits
  - Fleet Registrations
  - Fees
- Solid Waste Management
  - Construction Permitting
  - Operating Licenses
  - Disposal Areas
  - Financial Assurance
  - Quarterly Monitoring Reports
  - Annual Landfill Reports
  - Recycling and Reutilization
  - Surcharges (Fees)
- Scrap Tires
  - Hauler//Collection Site Registration

- Financial Assurance
- Grants for Cleanup and Redevelopment

Data for both the Site Identification and the Compliance Monitoring and Enforcement activities are managed in a cross-programmatic manner. This allows staff and the public to have an integrated view of the regulated activities and compliance history at a site.

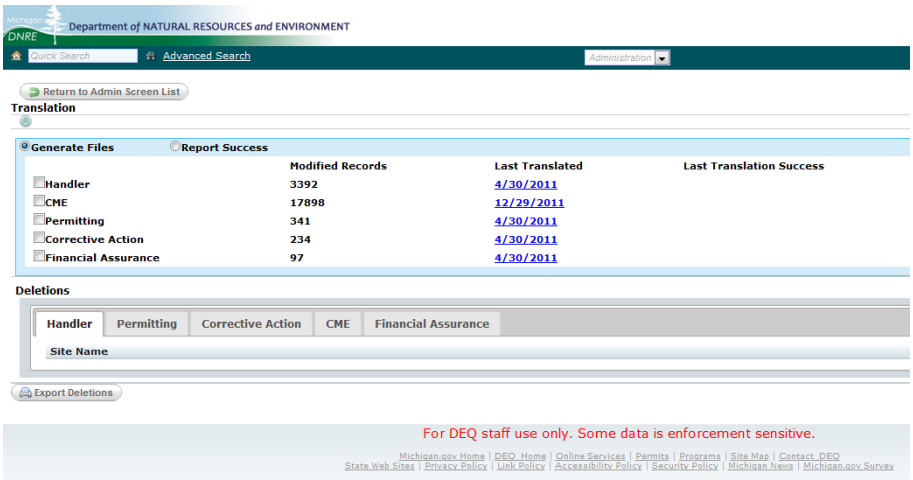


Evaluation Type	Status	Violations	Evaluation Date	Regulatory Program
NRR - NON-FINANCIAL RECORD REVIEW	IC	0	10/25/2010	169 - Scrap Tires
NRR - NON-FINANCIAL RECORD REVIEW	IC	0	10/22/2009	169 - Scrap Tires
CEI - COMPLIANCE EVALUATION INSPECTION ON-SITE	RTC	6	3/31/2009	111/121 - Hazardous Waste/Liquid Industrial Waste
NRR - NON-FINANCIAL RECORD REVIEW	IC	0	10/20/2008	169 - Scrap Tires
NRR - NON-FINANCIAL RECORD REVIEW	IC	0	10/17/2007	169 - Scrap Tires
NRR - NON-FINANCIAL RECORD REVIEW	IC	0	10/20/2006	169 - Scrap Tires
NRR - NON-FINANCIAL RECORD REVIEW	IC	0	11/10/2005	169 - Scrap Tires
NRR - NON-FINANCIAL RECORD REVIEW	RTC	1	6/13/2005	169 - Scrap Tires
CEI - COMPLIANCE EVALUATION INSPECTION ON-SITE	RTC	8	6/26/2003	111/121 - Hazardous Waste/Liquid Industrial Waste
CEI - COMPLIANCE EVALUATION INSPECTION ON-SITE	RTC	2	12/3/1998	111/121 - Hazardous Waste/Liquid Industrial Waste

WDS also has implemented a proven approach to submitting data through the Exchange Network to EPA's Central Data Exchange (CDX) for incorporation into RCRAInfo for the following RCRA subject areas:

- Handler
- Compliance Monitoring and Enforcement
- Permitting
- Corrective Action
- Financial Assurance

Each of the corresponding modules within WDS was designed with this objective in mind and the MDEQ has been successfully translating data to RCRAInfo since 2001 (originally flat files).



Massachusetts DEP Underground Storage Tank Application

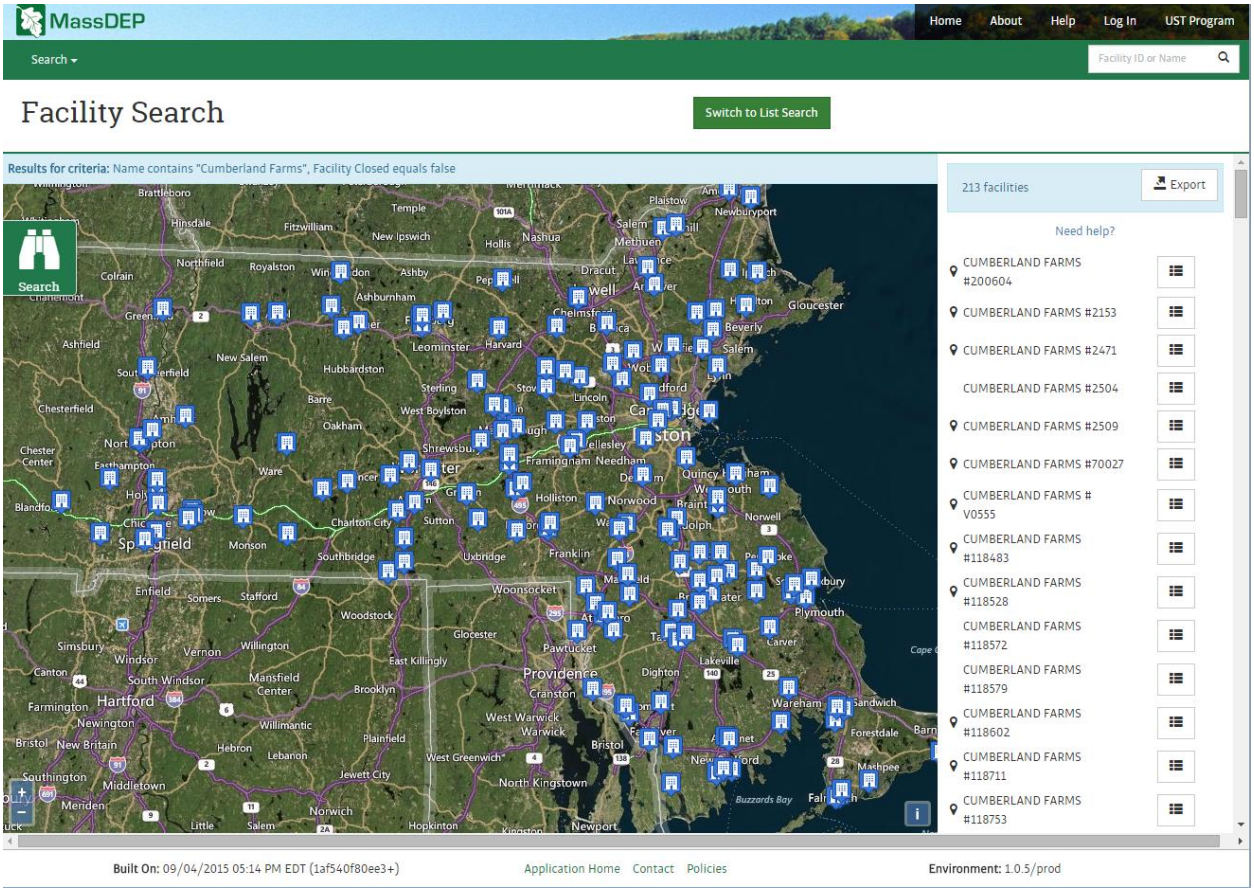
The Massachusetts Department of Environmental Protection (DEP) partnered with Windsor Solutions to design, develop, and implement a comprehensive state-of-the-art Underground Storage Tank (UST) Data Management System.

Windsor developed a custom CROMERR compliant eReporting system that provides facility owners/operators the ability to submit new facility registrations, amended registrations and transfer of ownership forms.

Windsor also installed and configured nSPECT (http://www.windsorsolutions.com/Products/nSpect) to support onsite tank inspections by third party inspectors and DEP inspector staff. nSPECT runs on most mobile platforms, and provides the ability for TPIs to choose the mobile device of choice. Data collected during inspections is synced with the Mass UST database and made available for the owner to review and approve before submitting to DEP.

Putting data collection in the hands of the regulated community has provided great time savings for DEP Staff. The system also includes a fully functional compliance module that streamlines issuance of enhancements letters.

Windsor redeveloped DEP's public facing UST application with a state of the art query tool that allows users to search for both tabular and spatial data. Facility and tanks details can be reviewed across the state.



The public application can be reached at the following url: https://ma-ust.windsorcloud.com/ust/

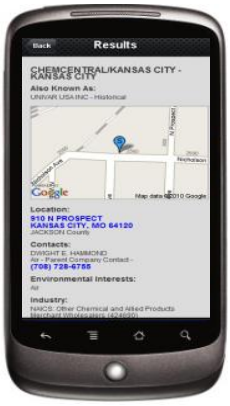
Additional highlights of the UST Data Management system:

1) CROMERR compliant forms processing
   - Certificate based Copy of Record
   - eSignatures
   - Secure Self Registration
2) Mobile Inspections using nSPECT
3) Full compliance/enforcement module
4) Mapping application using the latest OpenLayers 3
5) Amazon Cloud Hosted

Homeland Emergency Response Exchange

The purpose of this project was to develop an Internet-based process among the states in EPA Regions V and VII to provide available environmental, health, and natural resource information to emergency responders and operation centers involved in homeland security/emergency response planning and implementation. The system exchanges spatial data as well as other environmental information among multiple partners, including integrating and sharing the data from five agencies in Iowa, Kansas, Missouri, and Nebraska. The resulting system is used to enhance decision-making and risk assessment for Homeland Security and/or Emergency Response situations occurring within or across state boundaries.

The advent of the national Exchange Network has provided the necessary tools needed to support a robust and efficient exchange of data between environmental agencies and their partners. Many of the challenges in securely sharing data from many state agencies can now be addressed by the Network's inherent strengths.



There are two versions of the HERE Client. The main HERE Client application can be installed by an emergency responder on a laptop computer and be used in the field to assess local threats during emergency scenarios. This application provides a rich user interface that support spatial mapping, advanced data exploration, and sophisticated data export capabilities. It includes a highly advanced data synchronization engine that keeps large volumes of aggregated local data that originates from many agencies up to date using a nightly transparent synchronization process.

A second thin version of the HERE Client was also implemented for use on smart phones. This version required network connectivity but provides emergency responders with access to the key data needed when they are not equipped with a tablet equipped HERE Client.

States in EPA Regions V and VII are currently sharing data, with several additional states interested in joining the exchange in the future.

Combined with a powerful data retrieval tool, the HERE project incorporated a full life-cycle Internet-based data inquiry application based on the selected data flows at each agency with an intuitive, yet

powerful data retrieval tool custom-developed to support the needs of the EOPs and many others. This tool allows a responder to quickly assess and characterize immediate and reciprocal threats, such as chemical inventories, hazardous waste storage, and vulnerable drinking water infrastructure.

For more information, including videos etc. please visit www.HERENetwork.org